HISTORY INFORMATION FOR THE FOLLOWING MANUAL:

SERVICE MANUAL — RA-6 CHASSIS

MODEL NAME	REMOTE COMMANDER	DESTINATION	CHASSIS NO.
KP-51WS500	*RM-Y909*	*US/CND*	*SCC-P65HA*
KP-57WS500	*RM-Y909*	*US/CND*	*SCC-P65JA*
KP-65WS500	*RM-Y909*	*US/CND*	*SCC-P65KA*

ORIGINAL MANUAL ISSUE DATE: 7/2002

ALL REVISIONS AND UPDATES TO THE ORIGINAL MANUAL ARE APPENDED TO THE END OF THE PDF FILE.

REVISION DATE	REVISION TYPE	SUBJECT
7/2002	No revisions or updates are applicable at this time.	
8/2002	Supplement-1	New CRT's introduced for KP-57WS500 ONLY after S/N's 9200001 (P. 88) Correction to Service Data List for KP-65WS500 to improve greenish cutoff in MOVIE mode and VIVID mode. (P22) Correction to Exploded View Cover (KP-51WS500/57WS500 ONLY) parts lists to indicate correct location and new part numbers for Screen Holders. (P. 85)
10/2002	Correction-1	HV Hold Down Circuit Operation Check and Adjustment Table Corrected (C8188 should be C8118) Added Locator Lists to D and A PWB's
1/2003	Supplement-2	New CRT's introduced. Affects S/N's 9,700,001 and up.
4/2003	Supplement-3	Additional information added to Supplement-2. D and C Board P/N's added.
11/2003	Correction-2	Updated data relating to CR, CG and CB Boards. Affects Pages 55-57 (Schematics), 88 (Exploded View), 90-93 (Parts List).
10/2004	Removed Note from section 2-12-1. Setup For Adjustment. Note is intended for use by the factory during production, and should not be performed by service technicians.Replaced Page 38 with Page 38	

COLOR REAR VIDEO PROJECTOR

SONY®

9-965-932-07

Self Diagnosis Supported model

SERVICE MANUAL

RA-6 CHASSIS

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KP-51WS500	RM-Y909	US/CND	SCC-P65HA
KP-57WS500	RM-Y909	US/CND	SCC-P65JA
KP-65WS500	RM-Y909	US/CND	SCC-P65KA

KP-65WS500

RM-Y909

COLOR REAR VIDEO PROJECTOR

SONY

9-965-932-07

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SPECIFICATIONS

Power Requirements 120V AC, 60Hz

Power Consumption (W)
In Use (Max) 230W
In Standby Under 1 W

Inputs/Outputs

DVI-HDTV
1 terminal, 3.3V T.M.D.S., 50 ohms
The DVI-HDTV input terminal is compliant with the EIA-861 standard and is not intended for use with personal computers.

Video (IN)
4 total (1 on front panel)
1Vp-p, 75ohms unbalanced, sync negative

S Video (IN)
3 total (1 on front panel)
Y: 1Vp-p, 75ohms unbalanced, sync negative
C: 0.286Vp-p (Burst signal), 75ohms

Audio (IN)
6 total (1 on front panel)
500 mVrms (100% modulation)
Impedance:47 kilo ohms

Audio (VAR/RIX)
1 total
500 mVrms at the maximum volume setting (Variable)
500 mVrms (Fixed)
Impedance (Output):1 kilo ohm

TV Out
1 total
Video: 1 Vp-p 75 ohms unbalanced, Sync negative
Audio: 500 m Vrms (100% modulation)
Impedance (output): 1 kilo ohms

Control S (IN/OUT)
1 total
Minijacks

Component Video Input
2 (Y, P_B, P_R)
Y: 1.0 Vp-p, 75 ohms unbalanced, sync negative
P_B: 0.7 Vp-p, 75 ohms;
P_R: 0.7 Vp-p, 75 ohms

RF Inputs
2 total

Converter
1 total

	KP-51WS500	KP-57WS500	KP-65WS500
Speaker Output (W)	20W x 2		
Dimensions (W x H x D)			
mm	1194 x 1310 x 630 mm	1326 x 1377 x 690 mm	1542 x 1452 x 735 mm
in	$47^{1/8}$ x $51^{5/8}$ x $24^{7/8}$ in	$52^{1/4}$ x $54^{1/4}$ x $27^{1/4}$ in	61 x 57 x 29 in
Mass kg	76 kg	89 kg	125 kg
lbs	167 lbs 9 oz	196 lbs 3 oz	275 lbs 8 oz

Projection System
3 picture tubes, 3 lenses, horizontal in-line system

Picture Tube
7-inch high-brightness monochrome tubes (6.3 raster size), with optical coupling and liquid cooling system.

Projection Lenses
High performance, large diameter hybrid lens F1.1

Antenna
75 ohm external terminal for VHF/UHF

Television System
NTSC, American TV Standard

Channel Coverage
VHF: 2-13/ VHF: 14-69/ CATV: 1-125

Screen Size (measured diagonally)
51 inches (KP-51WS500)
57 inches (KP-57WS500)
65 inches (KP-65WS500)

Supplied Accessories
Remote Control RM-Y909
Batteries (2) size AA (R6)

Optional Accessories
A/V Cable (VMC-810/820/830 HG)
Audio Cable (RKC-515HG)
Component Video Cable (VMC-10/30 HG)
Control S Cable (RK-G69HG)
AV Receiver (STR-V555ES or equivalent)

Design and specifications are subject to change without notice.

WARNINGS AND CAUTIONS

CAUTION

Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield, or carbon painted on the CRT, after removing the anode.

WARNING!!

An isolation transformer should be used during any service to avoid possible shock hazard, because of live chassis. The chassis of this receiver is directly connected to the ac power line.

⚠ SAFETY-RELATED COMPONENT WARNING!!

Components identified by shading and ⚠ mark on the schematic diagrams, exploded views, and in the parts list are critical for safe operation. Replace these components with Sony parts whose part numbers appear as shown in this manual or in supplements published by Sony. Circuit adjustments that are critical for safe operation are identified in this manual. Follow these procedures whenever critical components are replaced or improper operation is suspected.

ATTENTION!!

Apres avoir deconnecte le cap de l'anode, court-circuiter l'anode du tube cathodique et celui de l'anode du cap au chassis metallique de l'appareil, ou la couche de carbone peinte sur le tube cathodique ou au blindage du tube cathodique.

Afin d'eviter tout risque d'electrocution provenant d'un châssis sous tension, un transformateur d'isolement doit etre utilisé lors de tout dépannage. Le châssis de ce récepteur est directement raccordé à l'alimentation du secteur.

⚠ ATTENTION AUX COMPOSANTS RELATIFS A LA SECURITE!!

Les composants identifies par une trame et par une marque ⚠ sur les schemas de principe, les vues explosees et les listes de pieces sont d'une importance critique pour la securite du fonctionnement. Ne les remplacer que par des composants Sony dont le numero de piece est indique dans le present manuel ou dans des supplements publies par Sony. Les reglages de circuit dont l'importance est critique pour la securite du fonctionnement sont identifies dans le present manuel. Suivre ces procedures lors de chaque remplacement de composants critiques, ou lorsqu'un mauvais fonctionnement suspecte.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly soldered connections. Check the entire board surface for solder splashes and bridges.

2. Check the interboard wiring to ensure that no wires are “pinched” or touching high-wattage resistors.

3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.

4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.

5. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.

6. Check the line cords for cracks and abrasion. Recommend the replacement of any such line cord to the customer.

7. Check the B+ and HV to see if they are specified values. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.

8. Check the antenna terminals, metal trim, “metallized” knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

Leakage Test

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers’ instructions to use these instructions.

2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.

3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The “limit” indication is 0.75 V, so analog meters must have an accurate low voltage scale. The Simpson’s 250 and Sanwa SH-63TRD are examples of passive VOMs that are suitable. Nearly all battery-operated digital multimeters that have a 2 VAC range are suitable (see Figure A).

How to Find a Good Earth Ground

A cold-water pipe is a guaranteed earth ground; the cover-plate retaining screw on most AC outlet boxes is also at earth ground. If the retaining screw is to be used as your earth ground, verify that it is at ground by measuring the resistance between it and a cold-water pipe with an ohmmeter. The reading should be zero ohms.

If a cold-water pipe is not accessible, connect a 60- to 100-watt trouble-light (not a neon lamp) between the hot side of the receptacle and the retaining screw. Try both slots, if necessary, to locate the hot side on the line; the lamp should light at normal brilliance if the screw is at ground potential (see Figure B).

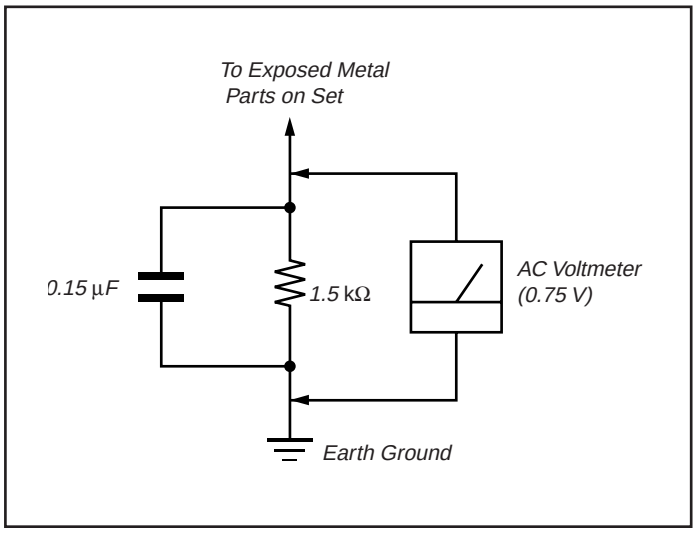


Figure A. Using an AC voltmeter to check AC leakage.

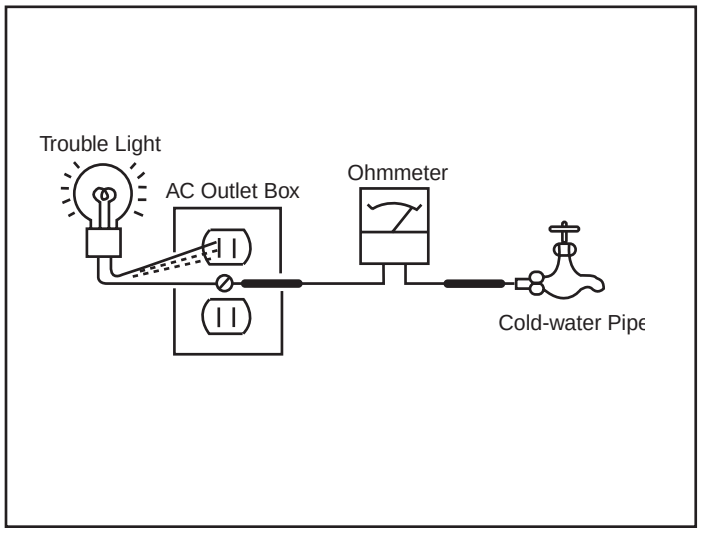


Figure B. Checking for earth ground.

SELF-DIAGNOSTIC FUNCTION

Self Diagnosis Supported model

The units in this manual contain a self-diagnostic function. If an error occurs, the STANDBY/TIMER LED will automatically begin to flash. The number of times the LED flashes translates to a probable source of the problem. A definition of the STANDBY/TIMER LED flash indicators is listed in the instruction manual for the user's knowledge and reference. If an error symptom cannot be reproduced, the Remote Commander can be used to review the failure occurrence data stored in memory to reveal past problems and how often these problems occur.

Diagnostic Test Indicators

When an error occurs, the STANDBY/TIMER LED will flash a set number of times to indicate the possible cause of the problem. If there is more than one error, the LED will identify the first of the problem areas.

Results for all of the following diagnostic items are displayed on screen. If the screen displays a "0", no error has occurred.

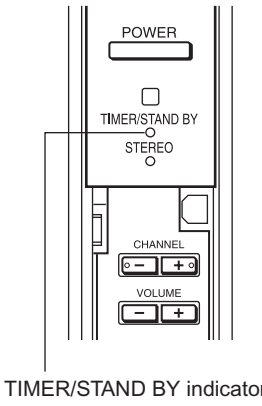
Diagnostic Item	No. of times STAND BY / TIMER lamp flashes	Probable Cause Location	Detected Symptoms
Power does not turn on	Does not light	• Power cord is not plugged in. • Fuse is burned out (F6001). (G Board)	• Power does not come on. • No power is supplied to the TV. • AC Power supply is faulty.
+B overcurrent (OCP)*	2 times	• H.OUT (Q8024) is shorted. (D Board) • +B PWM (Q8035, Q8038) is shorted. (D Board)	• Power does not come on. • Load on power line shorted.
+B overvoltage (OVP)	3 times	• IC501 is faulty. (G Board) • IC5002 is faulty. (G Board)	• Has entered standby mode.
Vertical deflection stopped	4 times	• ±15V is not supplied. (D Board) • IC8003 is faulty. (A Board)	• Has entered standby state after horizontal raster. • Vertical deflection pulse is stopped. • Power line is shorted, or power supply is stopped.
White Balance Failure (Not Balanced)	5 times	• Video OUT (IC7101, IC7201, IC7301) is faulty. (CR, CG, CB Boards) • CRT drive (IC309) is faulty. (A Board) • Screen (G2) is improperly adjusted. **	• No raster is generated. • CRT Cathode current detection reference pulse output is small.
Low B OCP/OVP (Overcurrent/Overvoltage) ***	6 times	• +5 line is overloaded. (A, B Boards) • +5 line is shorted. (A, B Boards)	• No picture
Horizontal deflection stopped	7 times	• Q8035, Q8038 is shorted. (D Board)	
High-voltage error	8 times	• T8005 is faulty. (D Board)	
Audio error	9 times	• ± 19V line is shorted. (A, B Boards) • IC708 is faulty. (A Board) • PS701 or PS702 is opened. (A Board)	• No sound

* If a +B overcurrent is detected, stoppage of the vertical deflection is detected simultaneously. The symptom that is diagnosed first by the microcontroller is displayed on the screen.

** Refer to Screen (G2) Adjustments in Section 2-2 of this manual

*** If TIMER or STAND BY indicator blinks six (6) times, unplug the unit and wait 10 minutes before performing the adjustment.

Display of Standby/Timer LED Flash Count



* One blink is not used for self-diagnosis.

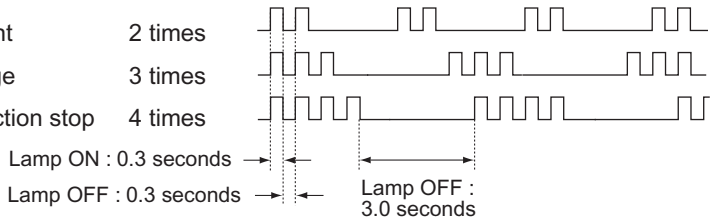
• EXAMPLE

<Diagnosis Items> <Number of Blinks>

• +B overcurrent 2 times

• +B overvoltage 3 times

• Vertical deflection stop 4 times



Release of TIMER STAND BY indicator blinking

The TIMER/STANDBY indicator blinking display is released by turning OFF the power switch on the TV main unit or removing the plug from the power.

Self-Diagnosis Screen Displays

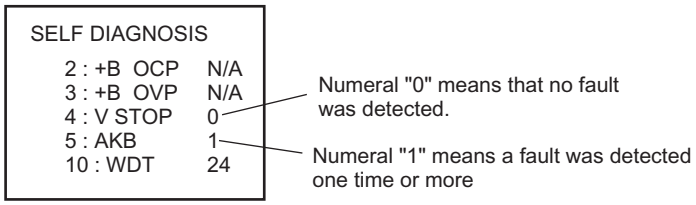
In cases of malfunctions where it is not possible to determine the symptom such as when the power goes off occasionally or when the screen disappears occasionally, there is a screen display on whether the malfunction occurred or not in the past (and whether the detection circuit operated or not) in order to allow confirmation.

Screen Display Method

Quickly press the remote command button in the following order from the standby state.

Display ⟶ Channel 5 ⟶ Sound Volume* − ⟶ Power ON

*Note that this differs from entering the service mode (sound volume +)



Self-Diagnosis Screen Display

The results display is not automatically cleared. In case of repairs and after repairs, check the self-diagnosis screen and be sure to return the results display to " 0 ".

If the results display is not returned to " 0 " it will not be possible to judge a new malfunction after completing repairs.

Method of Clearing Results Display

1. Power off (Set to the standby mode.)
2. Display ⟶ Channel 5 ⟶ Sound Volume + ⟶ Power ON (Service Mode)
3. Channel 8 ⟶ ENTER (Test reset = Factory preset condition)

Method of Ending Self Diagnosis Screen

When ending the self-diagnosis screen completely, turn the power switch OFF on the remote commander or the main unit.

Self-Diagnosis Function Operation

OCP Low B and +B line detect DET SHORT, and shut-down POWER ON RELAY.
Reset by turning power on/off. In case of +B is loaded approx. 1.5A or more, microcomputer detects it via **IC5005.**

OVP In case of +B becomes approx. 150V or more, POWER ON RELAY shuts down and microcomputer detects it via **IC5005**.
Reset by turning power on/off just the same as OCP.

Low B Occurs when set +5V is out

V Stop In the case of the V Drive disappearing, **Q8001** detects it and shuts-down the POWER ON RELAY. The microcomputer detects it and causes the LED to blink.

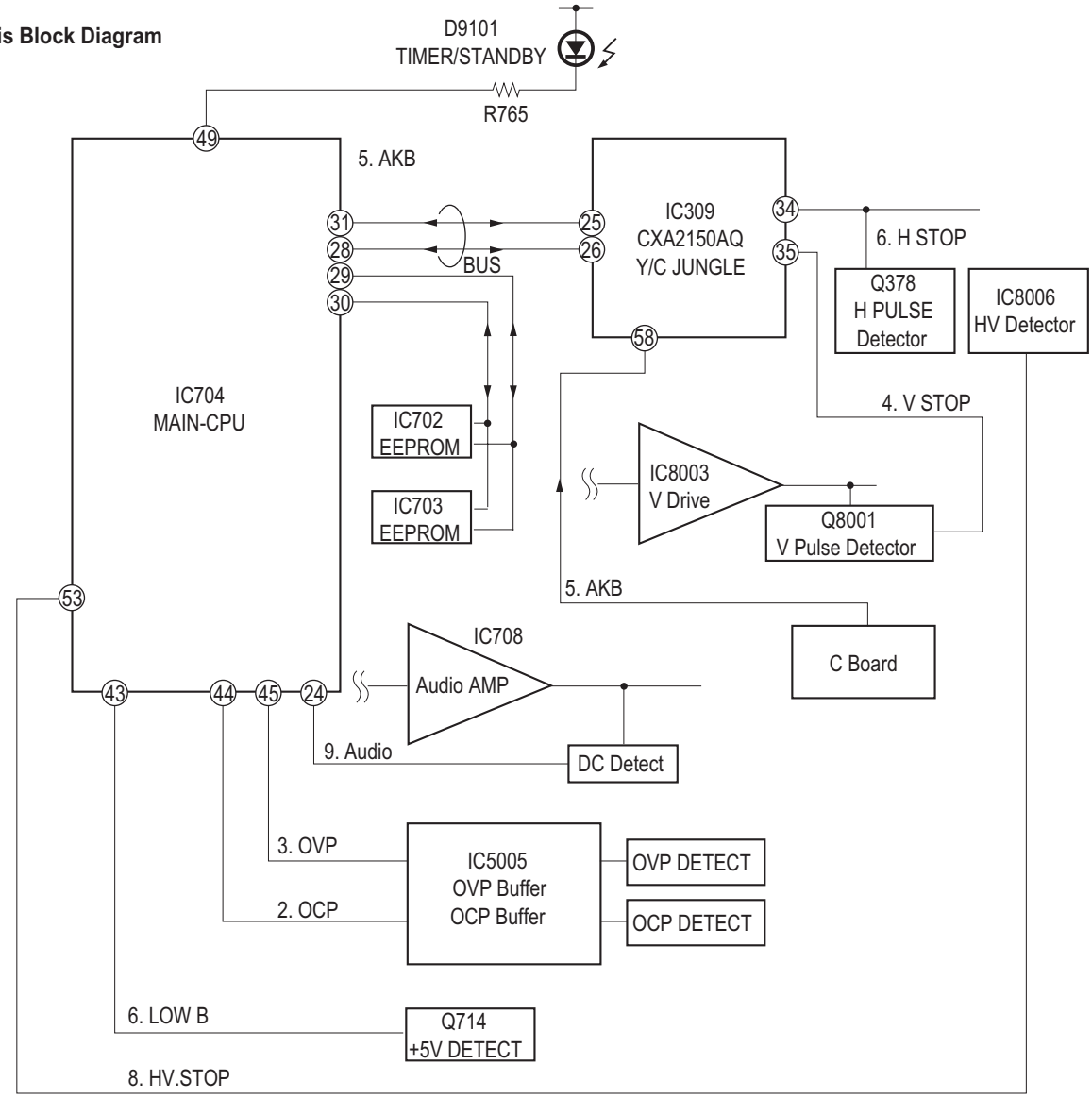
AKB IK detection. Makes LED blink when microcomputer doesn't detect IK, returns of **IC309 (CXA2150AQ)** 20 seconds or more.

H Stop In case H DRIVE disappears, **Q378** detects it and shuts-down POWER ON RELAY.
Microcomputer receives H Stop data from **Q378** and makes the LED blink.

HV Stop In case HV becomes 33kV or more, **IC8006** detects it and shuts-down POWER ON RELAY.
The microcomputer makes the LED blink.

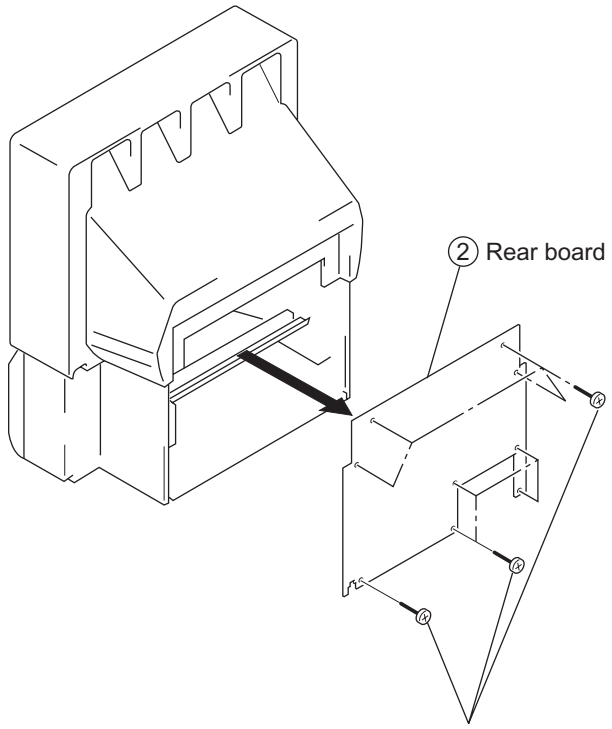
Audio In case of DC component overlaps the output of Audio Amp., the microcomputer detects it and shuts-down POWER ON RELAY.
The microcomputer makes the LED blink.

Self-Diagnosis Block Diagram

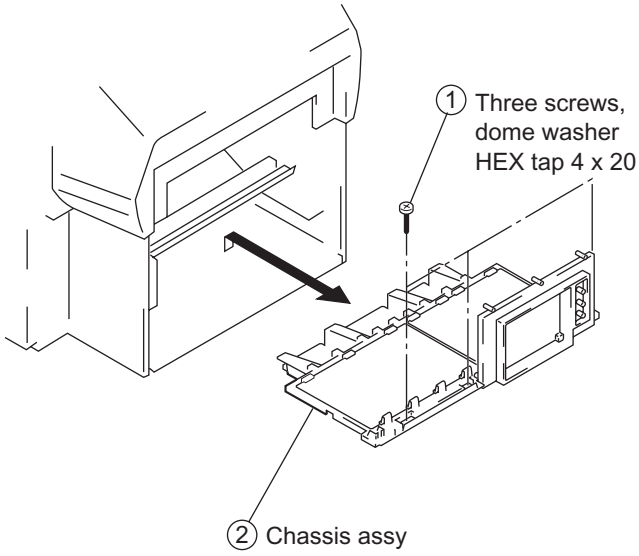


SECTION 1: DISASSEMBLY

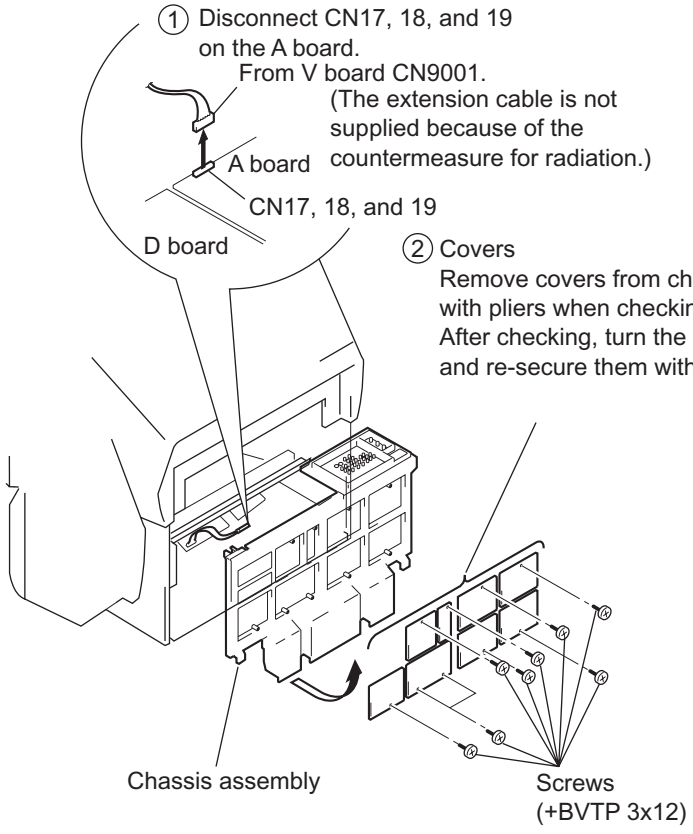
1-1. REAR BOARD REMOVAL



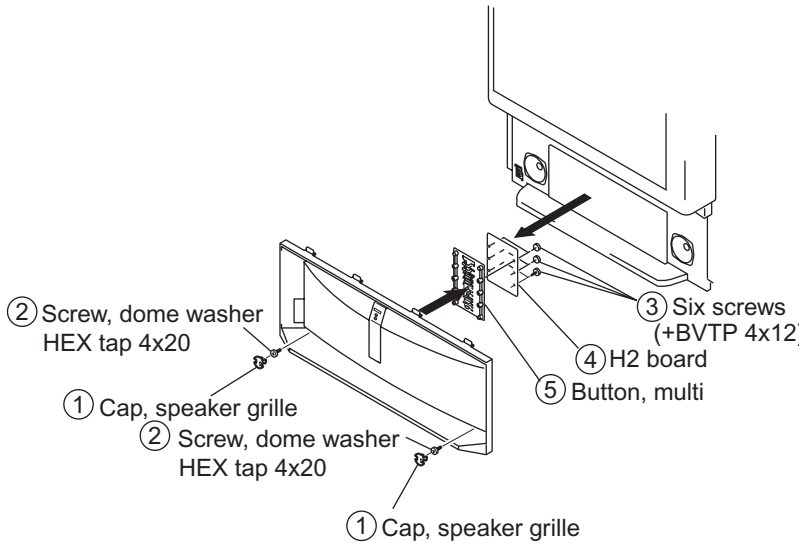
1-2. CHASSIS ASSEMBLY REMOVAL



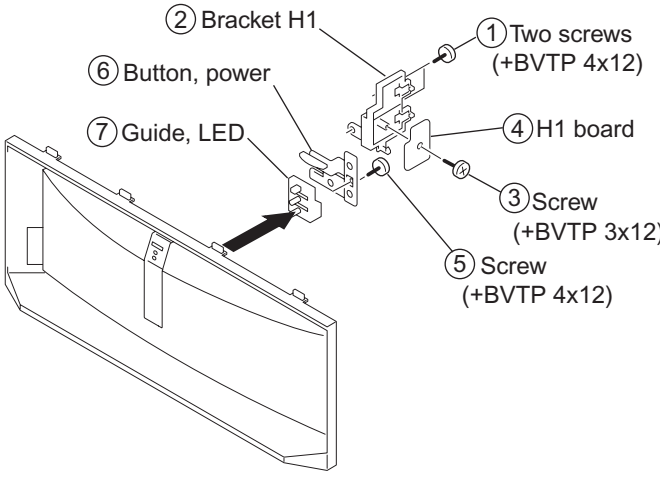
1-3. SERVICE POSITION



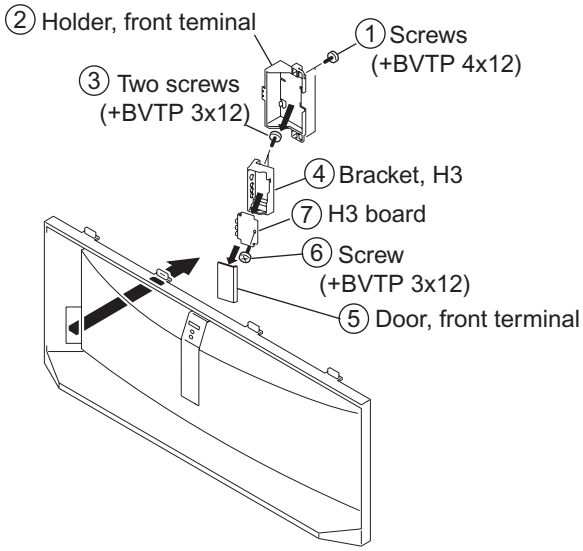
1-4. H2 BOARD REMOVAL



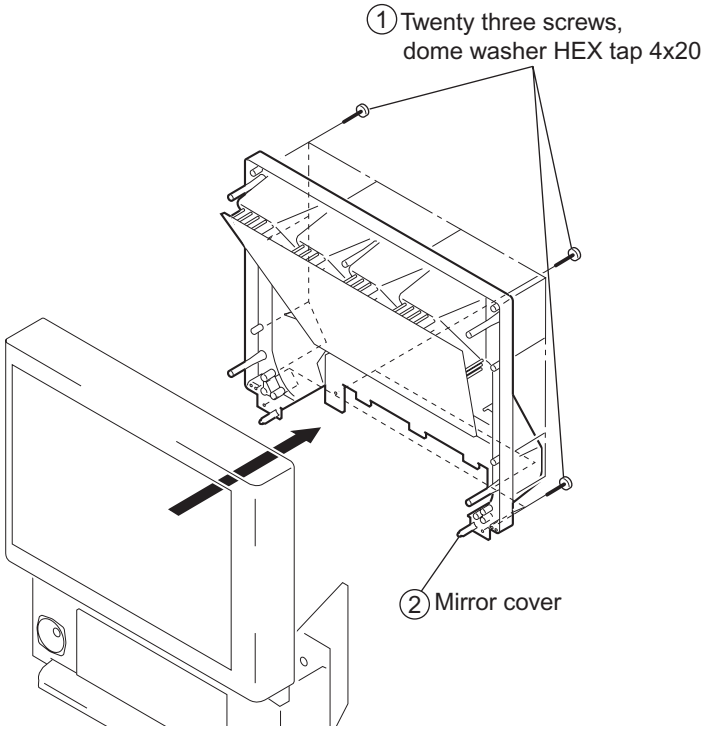
1-5. H1 BOARD REMOVAL



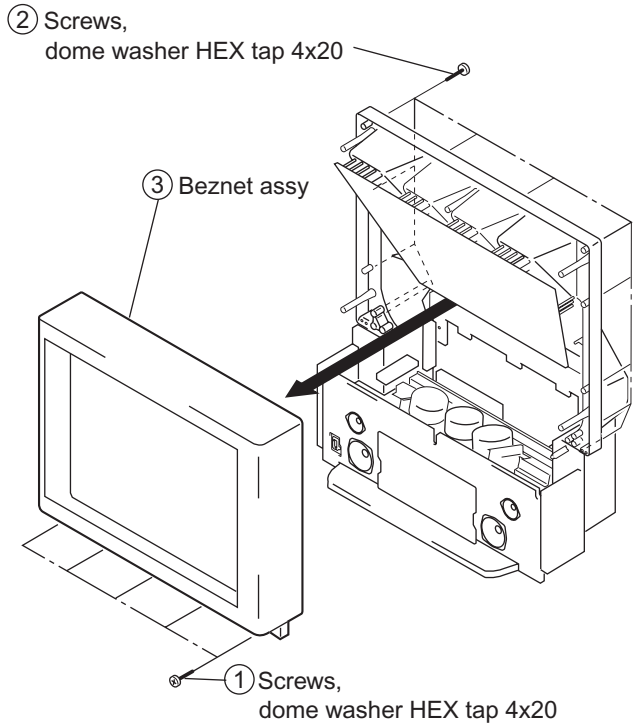
1-6. H3 BOARD REMOVAL



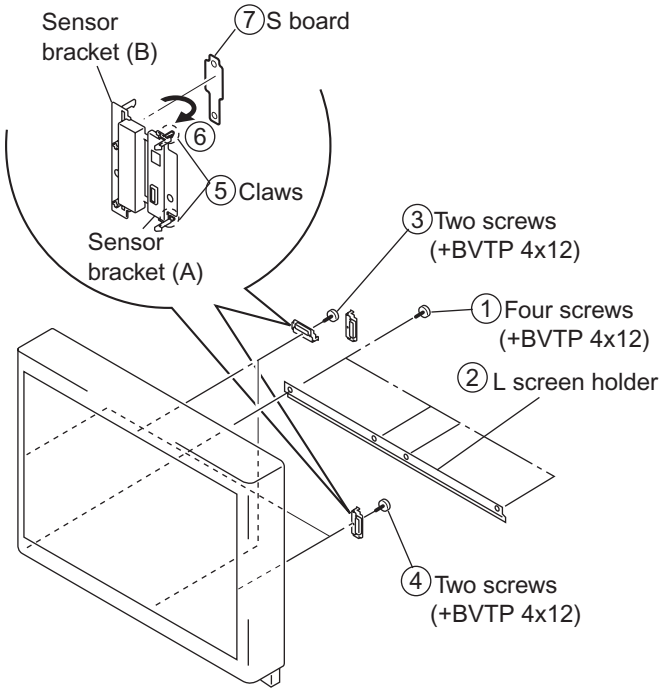
1-7. MIRROR COVER REMOVAL



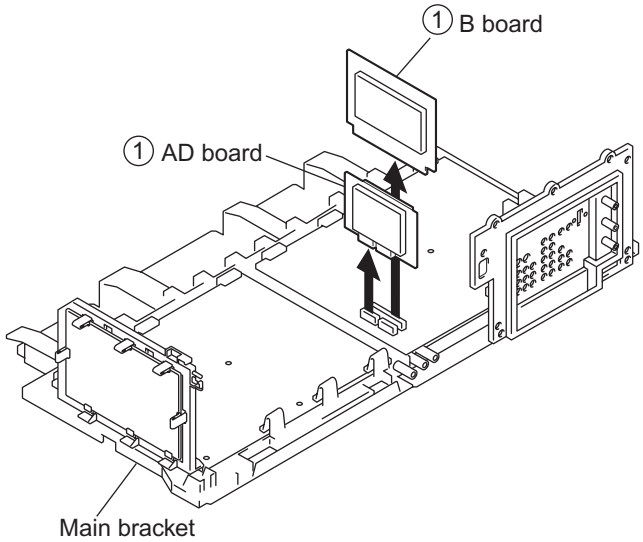
1-8. BEZNET ASSEMBLY REMOVAL



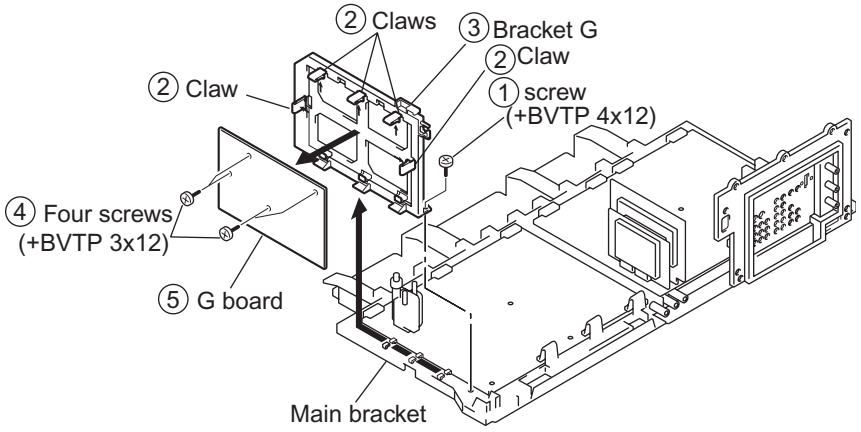
1-9. S BOARD REMOVAL



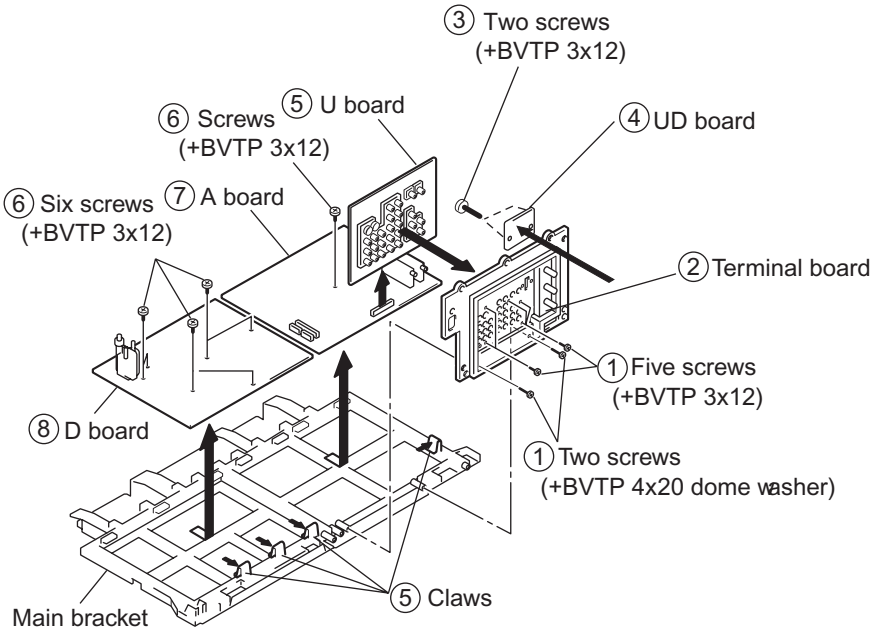
1-10.AD BOARD AND B BOARD REMOVAL



1-11. G BOARD REMOVAL

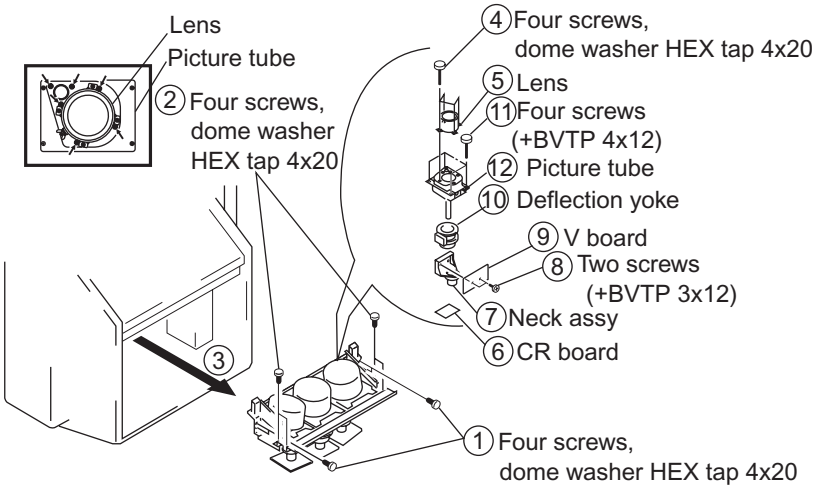


1-12. TERMINAL BOARD, A BOARD, D BOARD, U BOARD, AND UD BOARD REMOVAL

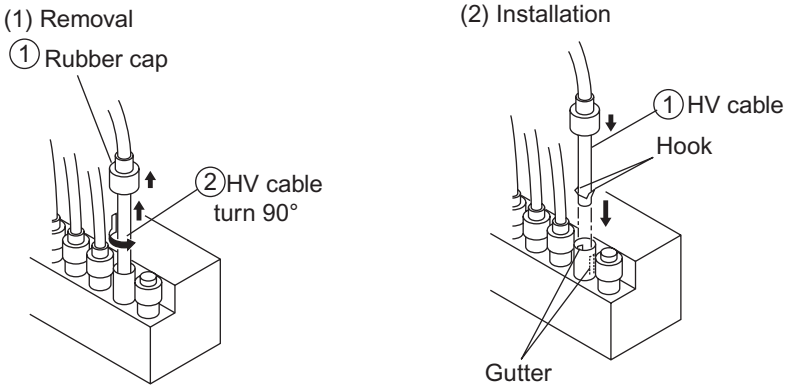


1-13.PICTURE TUBE REMOVAL

CAUTION Removing the arrow-marked screws is strictly prohibited.
If removed, it may cause liquid spill.



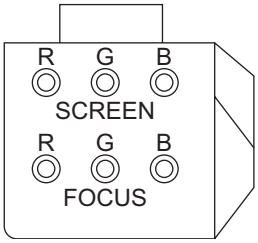
1-14.HIGH-VOLTAGE CABLE INSTALLATION AND REMOVAL



SECTION 2: SET-UP ADJUSTMENTS

2-1. SCREEN VOLTAGE ADJUSTMENT (COARSE ADJUSTMENT)

1. Receive the Monoscope signal..
2. Set BRIGHTNESS to 50% and PICTURE to minimum.
3. Turn the red VR on the focus block all the way to the left and then gradually turn it to the right until the retrace line is barely visible.
4. Gradually turn the control to the left until the retrace line disappears.

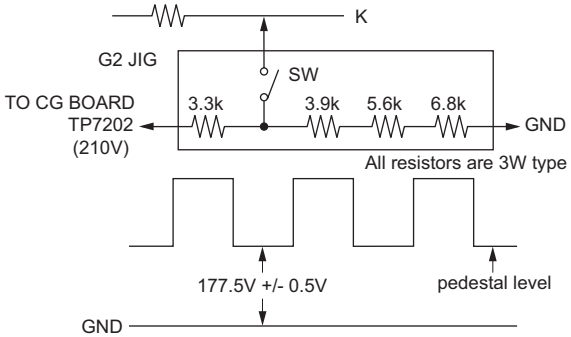


FOCUS Block

2-2. SCREEN (G2) ADJUSTMENT (FINE ADJUSTMENT)

If the jig described below is available, it is recommended that the G2 Fine Mode Adjustment be performed to set the screen controls to their optimal condition. If desired, you can build the jig illustrated below, using 3-watt resistors. Please note that if the proper voltage is not obtained with the listed resistor's values, then increase or decrease one of the values in the resistor network to obtain the correct voltage.

1. Select VIDEO-1 mode no signal applied (the screen must be black).
2. Connect the G2 JIG.
3. SW on JIG.
4. Connect an oscilloscope to the TP7101(KR), TP7202(KG) and TP7301(KB) of CR board, CG board, and CB board.
5. Adjust red, green, and blue screen voltage to 177.5+/-0.5V with screen VR on the focus block.



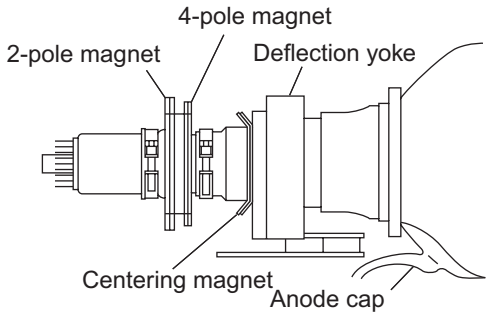
2-3. DEFLECTION YOKE TILT ADJUSTMENT

1. Connect the color bar generator monoscope pattern to Video 1 input.
2. Cover the red and blue CRT lenses with lens caps to allow only green to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).
3. Loosen the CRT's deflection yoke set screw and align the tilt of the deflection yoke so that the horizontal bars at the center of the monoscope pattern are horizontal.
4. After aligning the deflection yoke fasten it securely to the funnel-shaped portion (neck) of the CRT.

   The tilt of the deflection yoke is aligned in the mode.
5. Cover the green and blue CRT lenses with lens caps to allow only green to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps), then repeat steps 3 and 4 for the red CRT.

   Cover the green and red CRT lenses with lens caps to allow only green to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps), then repeat steps 3 and 4 for the blue CRT.

Note: If lens caps are unavailable, you can cut off the unnecessary color beams by controlling the service mode 2150P-2 1 RGBS.

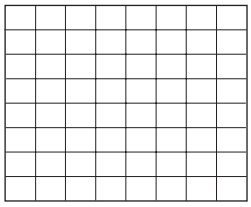


2-4. FOCUS LENS ADJUSTMENT

In this adjustment, use the remote commander while in service mode. For details on the usage of the service mode and the remote commander, please refer to section
2-10. ELECTRICAL ADJUSTMENTS BY REMOTE COMMANDER.

1. Loosen the lens screw.
2. Cover the red and blue CRT lenses with lens caps to allow only green to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).
3. Turn the green lens to adjust to the optimum focus point with the crosshatch signal.
4. Tighten the lens screw.
5. Cover the green and blue CRT lenses with the lens caps to allow only red to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).
6. Turn the red lens to adjust to the optimum focus point with the crosshatch signal.
7. Tighten the lens screw.
8. Cover the green and red CRT lenses with the lens caps to allow only blue to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).
9. Turn the blue lens to adjust to the optimum focus point with the crosshatch signal.
10. Tighten the lens screw.
11. After adjusting the items:
    2-5. FOCUS VR ADJUSTMENT,
    2-6. 2-POLE MAGNET ADJUSTMENT,
    2-8. 4-POLE MAGNET ADJUSTMENT,
    reconfirm the optimum focus point and adjust again if necessary.

* Every time 6 is pressed, the test signal changes to:
  "crosshatch+video signal" → "crosshatch+borderline(black)" → "crosshatch(black)" → "dots(black)" → off



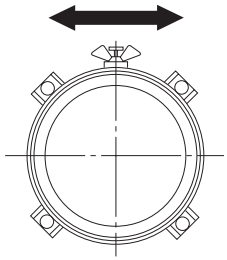
Test Signal

Note: If lens caps are unavailable, you can cut off the unnecessary color beams by controlling the service mode 2150P-2 1 RGBS.

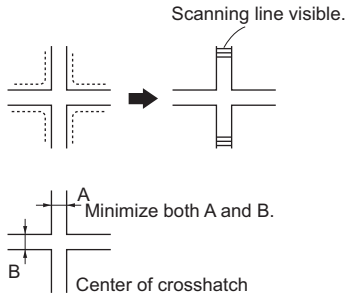
2-5. FOCUS VR ADJUSTMENT

1. Set generator to crosshatch.
2. Cover the red and blue CRT lenses with lens caps to allow only green to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).
3. Turn the green focus VR on the focus block to adjust to the optimum focus point with the crosshatch signal.
4. Cover the green and blue picture lenses with lens caps to allow only red to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).
5. Turn the red focus VR on the focus block to adjust to the optimum focus point with the crosshatch signal.
6. Cover the green and red picture lenses with lens caps to allow only blue to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).
7. Turn the blue focus VR on the focus block to adjust to the optimum focus point with the crosshatch signal.
8. After adjusting the items:
   2-4. FOCUS LENS ADJUSTMENT,
   2-6. 2-POLE MAGNET ADJUSTMENT,
   2-8. 4-POLE MAGNET ADJUSTMENT,
   reconfirm the optimum focus point and adjust again if necessary.

Note: If lens caps are unavailable, you can cut off the unnecessary color beams by controlling the service mode 2150P-2 1 RGBS.

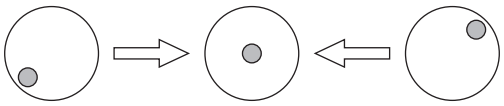


Lens



2-6. 2-POLE MAGNET AND CENTERING MAGNET ADJUSTMENT

1. Set the picture mode to PRO and picture to MAX.
2. Either select the PJED Test Pattern dot hatch signal or apply an external dot signal.
3. Cover the red and blue CRT lenses with lens caps to allow only green to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).
4. Turn the focus VR on the focus block to the left (counter clockwise) and set it to overfocus to enlarge the spot.
5. Adjust the CRT's 2-pole magnet so that the small bright spot is in the center.
6. Align the focus VR on the focus block and set it for the best focus.
7. Apply a Monoscope signal to the set.
8. Adjust the H-CENTERING and V-CENTERING roughly by the centering magnets.
9. Check 2-pole magnet adjustment. If necessary repeat steps 1-6.
10. Repeat steps 1 through 9 for the red CRT covering the green and blue CRT lenses with lens caps to allow only red to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps) and adjust the red focus control on the focus block.
11. Repeat steps 1 through 9 for the blue CRT covering the red and green CRT lenses with lens caps to allow only blue to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps) and adjust the blue focus control on the focus block.



Note: If lens caps are unavailable, you can cut off the unnecessary color beams by controlling the service mode 2150P-2 1 RGBS.

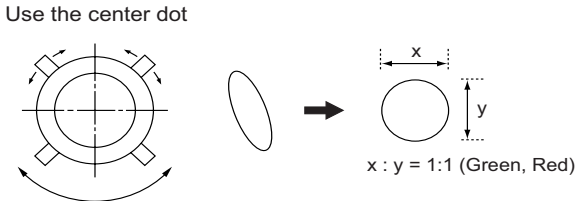
2-7. CENTERING MAGNET ADJUSTMENT

Not required - Combined with 2-6 2-Pole And Centering Magnet Adjustment.

2-8. 4-POLE MAGNET ADJUSTMENT

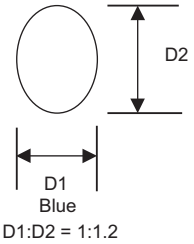
1. Set the picture mode to PRO and picture to MAX.
2. Receive the Dot signal.
3. Cover the red and blue CRT lenses with lens caps to allow only green to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).
4. Turn the (green) focus VR on the focus block to the right (clockwise) and set it to under-focus to reduce the spot.
5. Adjust the 4-pole magnet so that the small spot in the center of the screen becomes round for green and red.
6. Adjust the blue spot to an oval shape X:Y=1:1.2

Note: If lens caps are unavailable, you can cut off the unnecessary color beams by controlling the service mode 2150P-2 1 RGBS.



2-9. BLUE DEFOCUS ADJUSTMENT

1. Setup: Apply a Dot Hatch Signal and set the mode to Pro Mode. Change the color temperature to Cool in the user's menu.
2. Cover the red and green CRT lenses with lens caps to allow only blue to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).
4. Turn the blue focus VR on the focus block to the right (clockwise) to make the round dot oval.



5. Check the flare with a high luminance signal to make sure the flare is minimal while the bright spot is located in the center, If not, readjust the 2 and 4-pole magnets.
6. Check for uniformity on a 100% IRE to an all white signal.

Note: If lens caps are unavailable, you can cut off the unnecessary color beams by controlling the service mode 2150P-2 1 RGBS.

2-10. ELECTRICAL ADJUSTMENTS BY REMOTE COMMANDER

All of the circuit adjustments can be made by using the remote commander (RM-Y909).

NOTE : The following test equipment is required:

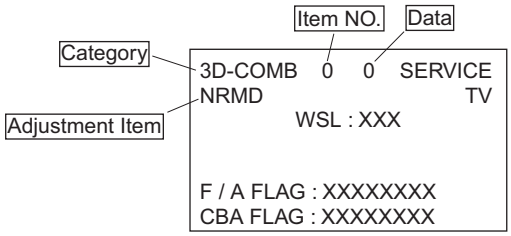
1. Pattern Generator (with component outputs)
2. Frequency counter
3. Digital multimeter
4. Audio oscillator

2-10-1. METHOD OF ENTERING THE SERVICE ADJUSTMENT MODE

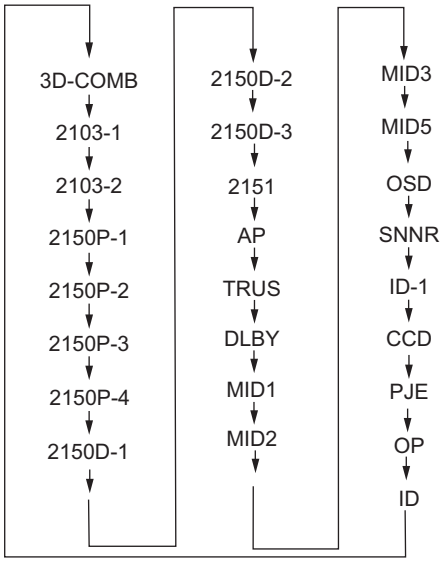
SERVICE MODE PROCEDURE

1. TV must be in Standby mode. (Power off)
2. Press “DISPLAY”, “5”, “VOL +”, then “POWER” on the remote commander.
   (Press each button within 1 second of pressing the previous button.)

SERVICE MODE ADJUSTMENT



3. The screen displays the item being adjusted within that category.
4. Press 1 or 4 on the remote commander to select the adjustment item.
5. Press 3 or 6 on the remote commander to change the data.
6. Press 2 or 5 on the remote commander to select the adjustment category.
   Every time you press 2 (Category up), service mode changes in the order shown below:



7. If you want to go back to the most recently saved value, press “0” then “ENTER” to read the memory.
8. Press “MUTING” then “ENTER” to write the new adjustment data into memory.
9. When you want to exit the service mode, turn the power off.

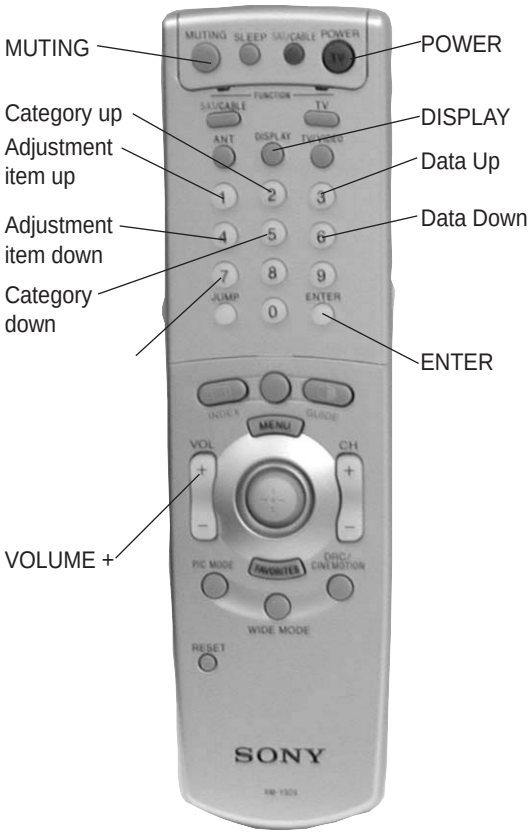
Note: Press “8” then “ENTER” on the remote commander to restore the factory settings for user controls and channel memories (this will also turn set off and then on to exit the service mode).

2-10-2. MEMORY WRITE CONFIRMATION METHOD

1. After adjustment, turn the power off with the remote commander.
2. Turn the power ON and set to service mode.
3. Cycle through the adjusted items again and confirm that the adjustments were saved.

2-10-3. ADJUSTING BUTTONS AND INDICATOR

Note: When the PJE mode (which displays an internally generated signal) is activated, several buttons on the remote commander will have different functions than the ones listed below. Therefore, when in the PJE mode, refer to section 2-12-3 for button functions.



RM-Y909

2-11 SERVICE DATA LISTS

11. APPENDIX

3D-COMB uPD64082

Reg.No	&Name	FUNCTION					
			RF/Video1-4		Svideo		
			Standard	Non-standard	Standard	Non-standard	
0	NRMD	Operation mode setting	0	1	3	3	
1	YAPS	Y-output correction	3				
2	CLKS	System clock setting	1				
			RF/Video1-4		Svideo		
			Standard	Non-standard	Standard	Non-standard	
3	NSDS	Selection for standard/non-standard signal processing	0	0	0	0	
4	MSS	Selection for inter-frame/inter-line processing	0				
5	KILS	Killer processing selection	1				
			RF	Video1-4			
6	CDL	C-signal phase with respect to the Y-signal	3	3			
			NRMD=0	NRMD=1	NRMD=2	NRMD=3	
7	DYCO	DY detection coring level	2	2	2	2	
8	DYGA	DY detection gain	10	10	10	10	
9	DCCO	DC detection coring level	5	5	5	5	
10	DCGA	DC detection gain	5	5	5	5	
11	YNRL	Frame recursive YNR nonlinear filter limit level	1 (				
12	CNRL	Frame recursive CNR nonlinear filter limit level	1				
			RF	Video1-4	Video5,6,7		
13	VTRH	Hysteresis for Hsysnc non-standard signal detection	1	1	1		
14	VTRR	Sensitivity for Hsysnc non-standard signal detection	1	1	1		
15	LDSR	Sensitivity for frame non-standard signal detection	2	2	2		
			VM=off	VM=Low	VM=Mid	VM=High	
16	VAPG	V-aperture compensation gain	0	0	0	0	
17	VAPI	V-aperture compensation convergence point	0	0	0	0	
				SNNR=0	SNNR=1	SNNR=2	SNNR=3
18	YPET	Y peaking filter center frequency	3	0	0	0	0
19	YPFG	Y peaking filter gain	8	0	1	2	3
			SNNR=0	SNNR=1	SNNR=2	SNNR=3	
20	YHCO	Y output high frequency component coring	0	1	1	1	Note: YHCO & YHCG are defined directly by SNNR data.
21	YHCG	Y output high frequency component coring gain	1	1	1	1	
22	HSSL	Hsync slice level	12				
23	VSSL	Vsync slice level	8				
24	ADCL	ADC clock delay	3				
			NRMD=0	NRMD=1	NRMD=2	NRMD=3	
25	D2GA	Moving detection gain	4	4	4	4	
26	KILR	Killer detection reference	3				

SERVICE DATA LISTS

3D-COMB uPD64082

Reg.No	&Name	FUNCTION								
27	OP	Option:Selection of comb filter&recursive n.reduction types.	1							
			RF	CVideo1	SVideo1	CVideo2	SVideo2	CVideo3	SVideo3	CVideo4
28	NR1	Noise reduction on/off	0	0	1	0	1	0	1	0
29	NR2	SNNR control on/off	0							
30	WSL	Noise level detection level data	0	Read data						
31	HPLL	H-PLL filter	1							
32	BPLL	Burst PLL filter	1							
33	FSCF	Burst extraction gain	0							
34	PLLF	PLL loop gain	1							
			RF	Video1-4	Video5,6,7					
35	CC3N	Selection if a line-comb filter C separation filter characteristic	0	0	0					
36	HDP	Fine adjustment of the system H-phase	5							
37	BGPS	Internal burst gate start position	4							
38	BGPW		10							
39	TEST	Test bit * forbidden setting	0							
40	WSC	Amount of noise detection coring	1							
			RF	Video1-4	Video5,6,7					
41	LIND	DRC-M line-doubling setting for non-standard signals	0	0	2					
42	PFGO	* Not used	3							
			SNNR=0	SNNR=1	SNNR=2	SNNR=3				
#16	VAPG		0	0	0	0				

NTSC-YCT CXA2103-1

Reg.No	&Name	FUNCTION								
			RF/Video1-4 P&P Left -DRC	Video5,6-480i P&P Left -DRC	Video7-480i P&P Left -DRC					
0	YLEV	Y-Out gain	34	40	40					
1	CLEV	Cb&Cr-Out gain	27	46	46					
			RF	Video1-4						
2	SCON	Sub contrast								
3	SCOL	Sub color								
4	SHUE	Sub hue								
5	YDLY	Y/C delay time	0	0						
			RF	Video1-4	Svideo	Video 5,6-480i	Video7-480i	SNNR=0	SNNR=1	SNNR=2	SNNR=3
6	SHAP	Sharpness	5	4	4	4	8	0	1	2	3
7	SHF0	Sharpness f0 selector	3	3	3	3	0				
8	PREO	Sharpness pre/over-shoot ratio	3	0	0	0	3				
9	BPF0	Chroma band filter f0 setting	3	0	0	0	0				
10	BPFO	Chroma band filter O setting	0	3	3	3	3				
11	BPSW	Chroma band filter on/off	1	0	0	0	0				
12	TRAP	Y block chroma trap filter on/off	0	0	0	0	0				
13	LPF	Y Cb Cr-Output LPF on/off	1	1	1	1	1				
			RF	Video1-4	Video5,6	Video7					
14	AFCG	AFC Loop gain	1	0	0	0					
15	CDMD	V countdown system mode selector	3	3	3	3					
16	SSMD	H&Vsync slide level setting	0	0	0	0					
17	HMSK	Masking of macrovision signal on/off	1	1	1	0					
18	HALI	H automatic adjustment on/off	0	0	0	0					
19	PPHA	H TIM phase adjustment video	7	7	7	7					

SERVICE DATA LISTS

NTSC-YCT CXA2103-1

			RF/Video1-4 P&P Left -DRC	Video5,6-480i P&P Left -DRC	Video7-480i P&P Left -DRC	
20	CBOF	Cb Offset Adjustment			34	Note: CBOF adjustment does not affect Video 7
21	CROF	Cr Offset Adjustment			32	Note: CROF adjustment does not affect Video 7
22	CBO2	Cb Offset Adjustment	0	0		Note: CB02 adjustment only affects Video 7
23	CRO2	Cr Offset Adjustment	0	0		Note: CR02 adjustment only affects Video 7

				P&P & Favorite				P&P & Favorite			
			Single Picture	UBLK-0	UBLK-1	UBLK-2	UBLK-3	UBLK-4	UBLK-5	UBLK-6	UBLK-7
24	ATPD	Auto-pedestal Inflection Point	0	0	0	2	0	0	2	3	2
25	DCTR	DC Transmission Ratio	0	0	0	1	0	0	2	2	3

NTSC-YCT CXA2103-2

Reg.No &Name FUNCTION

			RF/Video1-4 P&P Right	Video5,6,7-480 P&P Right , DRC	
0	YLEV	Y-Out gain	34	38	Note: Data in the right column is used when main signal is NOT 480i
1	CLEV	Cb&Cr-Out gain	27	31	
			RF	Video1-4	Note: Sub signal goes through DRC, when main signal is 480p, 1080i, or 720p
2	SCON	Sub contrast			
3	SCOL	Sub color			
4	SHUE	Sub hue			
5	YDLY	Y/C delay time	0	0	

			RF	Cvideo	Svideo	SNNR=0	SNNR=1	SNNR=2	SNNR=3
6	SHAP	Sharpness	4	4	4	0	1	2	3
7	SHF0	Sharpness f0 selector	3	3	3				
8	PREO	Sharpness pre/over-shoot ratio	0	0	0				
9	BPF0	Chroma band filter f0 setting	0	0	0				
10	BPFO	Chroma band filter O setting	0	0	0				
11	BPSW	Chroma band filter on/off	0	0	0				
12	TRAP	Y block chroma trap filter on/off	0	0	0				
13	LPF	Y Cb Cr-Output LPF on/off	0	0	0				
			RF	Video1-4					
14	AFCG	AFC Loop gain	1	0	Note: Reg.No 14 to 19 are the same data as CXA2103-1.				
15	CDMD	V countdown system mode selector	3	3					
16	SSMD	H&Vsync slide level setting	0	0					
17	HMSK	Masking of macrovision signal on/off	1	1					
18	HALI	H automatic adjustment on/ofl	0	0					
19	PPHA	H TIM phase adjustment video	7	7					

			RF/Video1-4 P&P Right	Video5,6,7-480 P&P Right , DRC
20	CBOF	Cb Offset Adjustment		
21	CROF	Cr Offset Adjustment		

				P&P & Favorite				P&P & Favorite			
			Single Picture	UBLK-0	UBLK-1	UBLK-2	UBLK-3	UBLK-4	UBLK-5	UBLK-6	UBLK-7
22	ATPD	Auto-pedestal Inflection Point P&P & Favorite	0	0	0	2	0	0	2	3	2
23	DCTR	DC Transmission Ratio P&P & Favorite	0	0	0	1	0	0	2	2	3

Note: Reg.No 22 and 23 are the same data as CXA2103-1.

SERVICE DATA LISTS

Reg.No	&Name	FUNCTION											
			RF	Cvideo	Svideo	Video5,6 480i	Video5,6 480P	Video5,6 1080i	P&P	Video7 vga	Video7 480i	Video7 480p	Video7 1080i
0	SBOT	Offset for SBRT	0	0	0	5	7	7	7	7	0	5	15
1	YOF	DC-offset for Y	0	0	0	0	0	0	0	7	5	7	7
2	CBOF	DC-offset for Cb	35	35	35	37	40	31	35	49	32	49	49
3	CROF	DC-offset for Cr	36	36	36	39	41	31	36	49	31	49	49
4	SBRT	Sub Bright											
5	RDRV	R output drive											
6	GDRV	G output drive	31										
7	BDRV	B output drive											
8	RCUT	R output cutoff											
9	GCUT	G output cutoff	31										
10	BCUT	B output cutoff											

			51WS500				57WS500				65WS500			
			Vivid	Std	Movie	Pro	Vivid	Std	Movie	Pro	Vivid	Std	Movie	Pro
11	WBSW	WB_S	0 (no memory)	0 (no memory)	0 (no memory)	0 (no memory)	0 (no memory)	0 (no memory)	0 (no memory)	0 (no memory)	0 (no memory)	0 (no memory)	0 (no memory)	0 (no memory)
12	SBOF	Offset for SBRT	63	63 (no memory)	63	63 (no memory)	63	63 (no memory)	63	63 (no memory)	63	63 (no memory)	63	63 (no memory)
13	RDOF	Offset for RDRV	64	63 (no memory)	67	63 (no memory)	65	63 (no memory)	67	63 (no memory)	65	63 (no memory)	67	63 (no memory)
14	GDOF	Offset for GDRV	63	63 (no memory)	63	63 (no memory)	63	63 (no memory)	63	63 (no memory)	63	63 (no memory)	63	63 (no memory)
15	BDOF	Offset for BDRV	69	63 (no memory)	56	63 (no memory)	69	63 (no memory)	56	63 (no memory)	70	63 (no memory)	56	63 (no memory)
16	RCOF	Offset for RCUT	63	63 (no memory)	63	63 (no memory)	63	63 (no memory)	64	63 (no memory)	63	63 (no memory)	64	63 (no memory)
17	GCOF	Offset for GCUT	63	63 (no memory)	63	63 (no memory)	63	63 (no memory)	63	63 (no memory)	63	63 (no memory)	63	63 (no memory)
18	BCOF	Offset for BCUT	65	63 (no memory)	61	63 (no memory)	66	63 (no memory)	62	63 (no memory)	65	63 (no memory)	61	63 (no memory)

CRT Driver CXA2150P-2 settings for Vivid mode

Reg.No	&Name	FUNCTION					
0	ALBK	PIC_ON:RGB output including AKB reference pulse on/off	1				
1	RGBS	R_ON/G_ON/B_ON : R/G/B outputs on/off	7				
2	BLKB	BLK_BTM:RGB output bottom limit level	3				
3	LIML	PLIMIT_LEV:Threshold level for excessively high inputs	0				
4	PABL	P_ABL:DC-level in RGB output detection for PEAK ABL	15				
5	SABL	S_ABL:S ABL gain	0				
6	AGNG	AGING_W/AGING_B:AGING_W/AGING_B modes on/off	0				
7	AKBO	AKBOFF:Automatic/Manual =Cut off setting	0				
			RF/Video1-4	Video5,6 480i	Video5,6 480P	Video5,6 1080i	P&P
8	SYPH	SYNC_PHASE:Hsync delay with respect to Video	0	0	0	0	0
9	CLPH	CLP_PHASE:Internal clamp pulse phase	3	3	3	3	3
10	CLGA	CLP_GATE:Switch for the gated internal clamp pulse with Hsync	0	0	0	0	0
11	JAXS	JAXIS:color axis switch	0				
12	BLKO	BLKO:Blanking switch	0				

SERVICE DATA LISTS

CRT Driver CXA2150P-3								
Reg.No	&Name	FUNCTION	Vivid					
			RF	Cvideo	Svideo	Video5,6 480i	Video5,6 480P	Video5,6 1080i	P&P
0	SYSM	SYSTEM:Signal bandwidth setting	1	1	1	1	1	2	2
1	UVML	VM_LEV:VM_OUT level	3	3	3	2	2	3	3
2	VMMO	System Micro pin#40	1	1	1	1	1	1	0
3	VMCR	VM_COR:VM_OUT coring level	0	0	0	1	1	3	3
4	VMLM	VM_LMT:VM_OUT limit level	3	3	3	3	3	3	3
5	VMF0	VM F0: VM f0	2	2	2	2	2	2	2
6	VMDL	VM_DLY:VM_OUT phase	1	2	2	2	2	0	1
7	SHOF	Offset for USHP=SHOF x 4	0	1	1	2	3	3	3
8	SHF0	SHP_F0:Sharpness circuit f0	1	1	1	1	1	0	1
9	PROV	PRE/OVER:Y signal pre/over-shoot ratio	0	0	0	3	3	3	3
10	F1LV	SHP_F1:Sharpness for higher f0	0	0	0	0	1	3	3
11	CDSP	SHP_CD:Sharpness in part of high color saturation	3	3	3	3	3	3	3
12	LTLV	LTI_LEV:Luminance transient improvement	3	3	3	3	3	3	3
13	LTMD	LTI_MODE:LTI mode setting	1	1	1	1	0	0	1
14	CTLV	CTI_LEV:Chrominance transient improvement	0	0	0	0	0	0	0
15	CTMD	CTI_MODE:CTI mode setting	0	0	0	0	0	0	0
16	UBOF	Offset for UBRT	0	0	0	0	7	9	7
17	UCOF	Offset for UCOL=UCOF x 2	3	3	3	3	3	0	2
18	UHOF	Offset for UHUE	0	0	0	0	0	0	0
19	MIDE	MID enhancement setting	3	15	15	7	11		

CRT Driver CXA2150P-2 Video7 Settings for Vivid Mode						
Reg.No	&Name	FUNCTION				
0	ALBK		-			
1	RGBS		-			
2	BLKB		-			
3	LIML		-			
4	PABL		-			
5	SABL		-			
6	AGNG		-			
7	AKBO		-			
			Video7 VGA	Video7 480i	Video7 480P	Video7 1080i
8	SYPH	SYNC_PHASE:Hsync delay with respect to Video	0	0	0	0
9	CLPH	CLP_PHASE:Internal clamp pulse phase	3	3	3	3
10	CLGA	CLP_GATE:Switch for the gated internal clamp pulse with Hsync	0	0	0	0
11	JAXS		-			
12	BLKO		-			

SERVICE DATA LISTS

CRT Driver CXA2150P-3 DVI Settings

Reg.No	&Name	FUNCTION	Vivid			
			Video7 VGA	Video7 480i	Video7 480p	Video7 1080i
0	SYSM	SYSTEM:Signal bandwidth setting	2	1	1	3
1	UVML	VM_LEV:VM_OUT level	2	2	2	3
2	VMMO	System Micro pin#40	1	1	1	1
3	VMCR	VM_COR:VM_OUT coring level	0	0	0	0
4	VMLM	VM_LMT:VM_OUT limit level	3	3	3	3
5	VMF0	VM F0: VM f0	0	1	1	0
6	VMDL	VM_DLY:VM_OUT phase	2	1	1	2
7	SHOF	Offset for USHP=SHOF x 4	0	2	2	3
8	SHF0	SHP_F0:Sharpness circuit f0	1	1	1	1
9	PROV	PRE/OVER:Y signal pre/over-shoot ratio	3	3	3	3
10	F1LV	SHP_F1:Sharpness for higher f0	0	0	0	0
11	CDSP	SHP_CD:Sharpness in part of high color saturation	3	3	3	3
12	LTLV	LTI_LEV:Luminance transient improvement	0	3	3	3
13	LTMD	LTI_MODE:LTI mode setting	1	0	0	1
14	CTLV	CTI_LEV:Chrominance transient improvement	0	0	0	3
15	CTMD	CTI_MODE:CTI mode setting	0	0	0	0
16	UBOF	Offset for UBRT	2	2	2	2
17	UCOF	Offset for UCOL=UCOF x 2	0	1	0	0
18	UHOF	Offset for UHUE	0	0	0	0
19	MIDE	MID enhancement setting	8	7	11	0

CRT Driver CXA2150P-3 settings for standard, movie and pro

Reg.No	&Name		Standard							Movie							Pro						
			RF	CV	SV	V5,6 480i	V5,6 480P	V5,6 1080i	P&P	RF	CV	SV	V5,6 480i	V5,6 480P	V5,6 1080i	P&P	RF	CV	SV	V5,6 480i	V5,6 480P	V5,6 1080i	P&P
#0	SYSM		1	1	1	1	1	2	2	1	1	1	1	1	2	2	1	1	1	1	1	2	2
#1	UVML		2	2	2	2	2	2	3	1	1	1	1	1	1	1	0	0	0	0	0	0	0
#2	VMMO		1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
#3	VMCR		1	0	0	1	1	3	3	1	1	1	1	1	3	3	3	3	3	3	3	3	3
#4	VMLM		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
#5	VMF0		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
#6	VMDL		0	2	2	2	2	1	1	1	2	2	2	2	1	1	2	2	2	2	2	1	1
#7	SHOF		1	0	0	0	2	3	3	1	1	1	1	1	1	1	0	0	0	0	0	0	0
#8	SHF0		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
#9	PROV		0	3	0	0	0	0	0	3	3	3	3	2	2	3	3	3	3	2	3	2	2
#10	F1LV		0	0	0	0	1	3	3	0	0	0	1	2	3	3	0	0	0	1	2	3	3
#11	CDSP		3	3	3	3	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
#12	LTLV		2	2	2	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
#13	LTMD		1	1	1	1	1	0	1	1	1	1	1	1	0	1	1	1	1	1	1	0	1
#14	CTLV		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
#15	CTMD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
#16	UBOF		7	7	7	7	7	9	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
#17	UCOF		1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
#18	UHOF		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
#19	MIDE		2	14	14	6	10	--	--	1	13	13	5	9	--	--	0	12	12	4	8	--	--

NVM ADDRESS: see the next page

SERVICE DATA LISTS

CRT Driver CXA2150P-3

Reg.No	&Name	FUNCTION	SNNR=0	SNNR=1	SNNR=2	SNNR=3
#1	UVML		0	0	0	0
#3	VMCR		0	+1	+2	+3
#10	F1LV		0	-1	-2	-3
#11	CDSP		0	0	0	0
#12	LTLV		0	0	0	0
#14	CTLV		0	0	0	0
#19	MIDE		0	0	0	0

CRT Driver CXA2150P-3 Video7 settings for standard, movie and pro

Reg.No	&Name		Standard				Movie				Pro			
			Video7 VGA	Video7 480i	Video7 480p	Video7 1080i	Video7 VGA	Video7 480i	Video7 480p	Video7 1080i	Video7 VGA	Video7 480i	Video7 480p	Video7 1080i
#0	SYSM		2	1	1	3	2	1	1	3	2	2	2	3
#1	UVML		2	2	2	2	2	1	1	1	2	0	0	0
#2	VMMO		1	1	1	1	1	0	0	0	1	0	0	0
#3	VMCR		0	0	0	0	0	0	0	0	0	0	0	0
#4	VMLM		3	3	3	3	3	3	3	3	3	3	3	3
#5	VMF0		0	1	1	0	0	1	1	0	0	0	0	0
#6	VMDL		2	1	1	2	2	1	1	2	2	2	2	2
#7	SHOF		0	3	3	3	0	1	1	1	0	0	0	2
#8	SHF0		1	1	1	1	1	1	1	1	1	1	1	1
#9	PROV		3	3	3	3	3	3	3	3	3	3	3	3
#10	F1LV		0	0	0	0	0	0	0	0	0	0	0	0
#11	CDSP		3	3	3	3	0	0	0	0	0	0	0	0
#12	LTLV		0	2	3	3	0	1	2	2	0	0	0	0
#13	LTMD		1	1	0	1	1	1	1	1	1	1	1	1
#14	CTLV		0	0	0	3	0	0	0	2	0	0	0	0
#15	CTMD		0	0	0	0	0	0	0	0	0	0	0	0
#16	UBOF		2	4	4	4	2	2	2	2	2	2	2	2
#17	UCOF		0	0	0	0	0	0	0	0	0	0	0	0
#18	UHOF		0	0	0	0	0	0	0	0	0	0	0	0
#19	MIDE		8	6	10	0	8	5	9	0	8	4	8	0

NVM ADDRESS: see the next page

CRT Driver CXA2150P-3

Reg.No	&Name	FUNCTION	SNNR=0	SNNR=1	SNNR=2	SNNR=3
#1	UVML		0	0	0	0
#3	VMCR		0	+1	+2	+3
#10	F1LV		0	-1	-2	-3
#11	CDSP		0	0	0	0
#12	LTLV		0	0	0	0
#14	CTLV		0	0	0	0
#19	MIDE		0	0	0	0

SERVICE DATA LISTS

CRT Driver CXA2150P-4										
Reg.No	&Name	FUNCTION	Vivid	Standard	Movie	Pro				
0	UPIC	PICTURE:Picture	63	44	31	31				
1	UBRT	BRIGHT:Brightness	26	31	31	31				
2	UCOL	COLOR:Color	31	31	31	31				
3	UHUE	HUE:Hue	31	31	31	31				
4	USHP	SHARPNESS:Sharpness	32	40	31	31				
5	UTMP	Color Temperature	2	1	0	1				
6	UDCL	DCOL:Dynamic color setting	2	2	0	0				
			RF/Video1-4	Video5,6 480i	Video5,6 480P	Video5,6 1080i	P&P	Video7 vga	Video7 480i	Video7 480p	Video7 1080i
7	AXIS	COL_AXIS:color matrix setting	0	0	0	0	0	0	0	0	0
			Picture Mode Vivid								
			RF/Video1-4	Video5,6 480i	Video5,6 480P	Video5,6 1080i	P&P	Video7 vga	Video7 480i	Video7 480p	Video7 1080i
8	UGAM	GAMMA_L:RGB output GAMMA correction	5	4	4	1	5	0	4	4	1
9	AGAM	GAMMA_L---Void Data	---								
			UGAM-0	UGAM-1	UGAM-2	UGAM-3	UGAM-4	UGAM-5	UGAM-6	UGAM-7	
10	GSBO	Offset for SBRT	0	0	0	0	0	0	0	0	
11	GCOO	Offset for UCOL	0	0	0	0	0	0	0	0	
12	GHUO	Offset for UHUE	0	0	0	0	0	0	0	0	
			Picture Mode Vivid								
			RF/Video1-4	Video5,6 480i	Video5,6 480P	Video5,6 1080i	P&P	Video7 vga	Video7 480i	Video7 480p	Video7 1080i
13	UBLK	Initial Black Level	6	6	6	6	4	0	6	6	6
14	ABLK	--- Void Data	---								
			UBLK0	UBLK1	UBLK2	UBLK3	UBLK4	UBLK5	UBLK6	UBLK7	
15	DCTR	DC_TRAN:Y signal DC transmission	1	1	1	2	3	2	3	3	
16	DPIC	DPIC_LEV:Y signal AUTO PEDESTAL level	0	1	2	1	1	2	1	2	
17	DSBO	Offset for SBRT	7	7	7	7	7	7	7	7	
18	ABLM	ABL MODE:ABL mode	0	0	0	0	0	0	1	1	
			Full								
19	ABLT	ABL_TH:ABL current detection Vth control	0								
20	EPOF	Offset for UPIC=EPOF x - void Data	{A6 E9 1F}								
21	SPOF	Offset for UPIC=SPOF x - Not used	15	<< Only available at Vcomp1&2.							
			RF/Video1-4	Video5,6 480i	Video5,6 480P	Video5,6 1080i	P&P	Video7 vga	Video7 480i	Video7 480p	Video7 1080i
22	SCON	SUB_CONTRAST:SUB PICTURE	8	5	5	4	4	5	5	5	4
23	CLOF	Offset for UCOL	8	8	8	8	8	8	8	8	8
24	HUOF	Offset for UHUE	4	4	4	4	4	4	4	4	4
25	IDSW	Not used									
26	DATA	Display of vertical compression modes. Not use	0								

SERVICE DATA LISTS

CRT Driver CXA2150P-4																
Reg.No &Name		FUNCTION														
			SNNR =0	SNNR =1	SNNR =2	SNNR =3										
#4	USHP	SHARPNESS:Sharpness	0	1	3	4										
			Picture Mode : Standard					Picture Mode : Movie					Picture Mode : Pro				
			RF & V1-4	V5,6 480i	V5,6 480P	V5,6 1080i	P&P	RF & V1-4	V5,6 480i	V5,6 480P	V5,6 1080i	P&P	RF & V1-4	V5,6 480i	V5,6 480P	V5,6 1080i	P&P
#8	UGAM	GAMMA_L:RGB output	2	2	2	1	1	0	0	0	0	0	0	0	0	0	0
		GAMMA correction	A6 22 07	A6 23 07	A6 24 07	A6 25 07	A6 26 07	A6 27 07	A6 28 07	A6 29 07	A6 2A 07	A6 2B 07	A6 2C 07	A6 2D 07	A6 2E 07	A6 2F 07	A6 30 07
			Video7 VGA	Video7 480i	Video7 480P	Video7 1080i		Video7 VGA	Video7 480i	Video7 480P	Video7 1080i		Video7 VGA	Video7 480i	Video7 480P	Video7 1080i	
#8	UGAM DVI	GAMMA_L:RGB output	0	2	2	1		0	0	0	0		0	0	0	0	
		GAMMA correction	A6 35 07	A6 36 07	A6 37 07	A6 38 07		A6 39 07	A6 3A 07	A6 3B 07	A6 3C 07		A6 3D 07	A6 3E 07	A6 3F 07	A6 40 07	
			Picture Mode : Standard					Picture Mode : Movie					Picture Mode : Pro				
			RF & V1-4	V5,6 480i	V5,6 480P	V5,6 1080i	P&P	RF & V1-4	V5,6 480i	V5,6 480P	V5,6 1080i	P&P	RF & V1-4	V5,6 480i	V5,6 480P	V5,6 1080i	P&P
#13	UBLK	Initial Black Level	3	3	3	3	3	1	1	1	1	1	0	0	0	0	0
			A6 22 38	A6 23 38	A6 24 38	A6 25 38	A6 26 38	A6 27 38	A6 28 38	A6 29 38	A6 2A 38	A6 2B 38	A6 2C 38	A6 2D 38	A6 2E 38	A6 2F 38	A6 30 38
			Video7 VGA	Video7 480i	Video7 480P	Video7 1080i		Video7 VGA	Video7 480i	Video7 480P	Video7 1080i		Video7 VGA	Video7 480i	Video7 480P	Video7 1080i	
#13	UBLK DVI	Initial Black Level	0	3	3	3		0	1	1	1		0	0	0	0	
			A6 35 38	A6 36 38	A6 37 38	A6 38 38		A6 39 38	A6 3A 38	A6 3B 38	A6 3C 38		A6 3D 38	A6 3E 38	A6 3F 38	A6 40 38	

CRT Driver CXA2150D-1							
Reg.No &Name		FUNCTION	1080i	FULL	NORMAL	ZOOM	WIDE ZOOM
0	VPOS	V_POSITION:Vertical position					
1	VSIZ	V_SIZE:Vertical size					
2	VSZO	V_SIZE OFFSET		0			
3	VLIN	V_LINEARITY:Vertical linearity		7			
4	VSCO	S_CORRECTION:Vertical S-correction	9	9		9	9
5	VCEN	VSAW0 DCH/VSAW0 DCL:Vertical center adjustment		31			
6	VPIN	VSAW0_AMP:Vertical PIN adjustment		15			
7	NSCO	VSAW1_DC:Rotation		7			
8	HTPZ	VSAW1_AMP:Horizontal trapezoid		15			
9	ZOOM	ZOOM_SW:Zoom switch	0		0	1	1
10	APSW	ASP_SW:Aspect switch	0	0	0	0	0
11	ASPT	V_ASPECT:Aspect ratio	0	0	0	44	22
12	SCRL	V_SCROLL:Vertical scroll	29	29	29	29	29
13	UVLN	UP_VLIN:Upper vertical linearity	0		0	0	5
14	LVLN	LO_VLIN:lower vertical linearity	0		0	0	5

SERVICE DATA LISTS

CRT Driver CXA2150D-2

Reg.No	&Name	FUNCTION	1080i	FULL/NORM	ZOOM	WIDE ZOOM
0	HCNT	HC_PARA_DC:Horizontal center	19			
1	HPOS	H_POSITION:Horizontal position	25			
2	HSIZ	H_SIZE:Horizontal size				
3	SLIN	MP_PARA_DC:Horizontal S-correction				
4	MPIN	MP_PARA_AMP:Horizontal middle pin	0			0
5	PIN	PIN_AMP:Horizontal pin	10			10
6	PIN0	PIN AMP offset	7	7	7	7
7	UCP	UP_CPIN:Upper corner pin	31			31
8	LCP	LO_CPIN:Lower corner pin	31			31
9	UXCG	UP_UCG:Upper extra corner pin gain	0			0
10	LXCG	LO_UCG:Lower extra corner pin gain	0			0
11	UXCP	UP_UCP:Upper extra corner pin position	2			2
12	LXCP	LO_UCP:Lower extra corner pin position	2			2
13	XCPP	UC_POL:Extra corner pin polarity	0			0
14	PPHA	PIN_PHASE:Pin phase	31			
15	VANG	AFC_ANGLE:AFC angle	31			
16	LANG	HC_PARA_PHASE:Linearity angle	33			
17	VBOW	AFC_BOW:AFC bow	31			
18	LBOW	HC_PARA_AMP:Linearity bow	48			
19	CPY1	Copy function 1: * Not used	0			

CRT Driver CXA2150D-3

Reg.No	&Name	FUNCTION	1080i	Full	NORMAL	Zoom	WideZoom
0	HBLK	HBLK_SW:Horizontal blanking switch	1				
1	LBLK	LEFT_BLK:Left blanking	56	58			
2	RBLK	RIGHT_BLK:Right blanking	25	23			
3	VBLK	VBLK_SW:Vertical blanking switch	1		1	0	0
4	TBLK	UP_BLK:Top blanking	4	15	15	15	15
5	BBLK	LO_BLK:Bottom blanking	5	15	15	15	15
6	VCMP	V_COMP:Vertical compensation	0	0	0	0	0
7	HCMP	H_COMP:Horizontal compensation	0		0	0	0
8	ACMP	AFC_COMP:AFC compensation	0		0	0	0
9	PCMP	PIN_COMP:Pin compensation	0		0	0	0
10	AFCM	AFC_MODE:AFC compensation	2	3			
11	VFRQ	V_FREQ:Vertical frequency	1				
12	VON	V_ON:Vertical drive on	1				
13	JUMP	JMP_SW:Reference pulse jump switch	0				
14	VDJP	VDRV_SW:Vertical drive switch	1	1	1	1	1
15	VDST	RST_SW:Vertical drive start switch	0	0	0	0	0
16	EWDC	EW_DC:Pin DC level shift	0				
17	AKBT	AKBTIM:AKB timing	9	9	9	9	9

SERVICE DATA LISTS

Component I/F & Sync Separation CXA2171

Reg.No	&Name	FUNCTION	Video5,6 480i	Video5,6 480P	Video5,6 1080i	Video5,6 720P	Video7 480i	Video7 480P	Video7 1080i	Video7 720P
			15.75khz	31.50khz	33.75khz	45khz	15.75khz	31.50khz	33.75khz	45khz
0	MTRX	MAT_OUT	0	0	1	1	0	0	1	1
1	GAIN	GAIN_SEL	0							
2	CBGN	CBGAIN	9							
3	VTC	V_TC	1							
4	HWID	H_WIDTH	1							
			Video5,6	Video7	Sub					
5	HSEP	HSEP_SEL	1	1	0					
6	TEST	TEST	0							
7	FRGB	No used	0							
			V5,6,7 1080i	ELSE						
8	HMSK	Hsync masking in vertical retrace	0	1						

Audio Processor BH3868FS

Reg.No	&Name	FUNCTION	
0	SVOL	Volume:Offset for Volume	0
1	SBAL	Balance Offset for Balance	7
2	SBAS	Bass:Offset for Bass	10
3	STRE	Treble:Offset for Treble	7
4	BBLP	BBE low pass filter	0
5	BBHP	BBE high pass filter	2
6	SREF	Surround effect	11
7	AGC	Auto gain control	0
8	BBE	BBE on/off	0

TruSurround NJM2180

Reg.No	&Name	FUNCTION	
0	TSMD	Trusurround effect selection	2
1	ATT	No used for Wide model	0

DLBY NJW1106

Reg.No	&Name	FUNCTION	
0	DBMD		0
1	SCH		0
2	ADSW		0
3	CECH		0
4	DELY		7
5	SSEL		0

SERVICE DATA LISTS

MID-1

Reg.No	&Name	FUNCTION			
	Display Data				
0	DHPH	H active display area phase	110		
1	DVPH	V active display area phase	20		
2	DHAR	H active display area size	240		
3	DVAR	V active display area size	135		
4	DHPW	display H pulse width	55		
5	DVPW	display V pulse width	5		
22	DPSW	display PLL switch	1		
23	MDL	model select	0		
	Misc. Common Data		Data		
6	DYCD	display output Y-C delay correction	2		
7	DYSD	display output YS signal delay select	1		
	Favorite / Other		Normal	Favorite	Others
8	MDHP	main display picture H position	154	9	0
10	MDHS	main display picture H size	162	149	240
	Single / Favorite		Single 480i/480I	Single 720P	Favorite
9	MDVP	main display picture V position	30	30	20
11	MDVS	main display picture V size	120	120	97
	Index / Others		Index	Others	
12	MLHP	multi picture mode H position	36	36	
13	MLVP	multi picture mode V position	31	31	
	Favorite		Favorite		
14	SDHP	sub display picture H position	166		
15	SDVP	sub display picture V position	20		
	Favorite		Favorite		
16	SDHS	sub display picture H size	44		
17	SDVS	sub display picture V size	29		
	PinP Position				
18	PDHP		-		
19	PDVS		-		
	PinP Size				
20	PDHS		-		
21	PDVS		-		
	Single / Others		Single	Others	
24	BCOL	Backgraund Y level	5	5	

MID-2

Reg.No	&Name	FUNCTION				
	MID Mode, Wide mode, Input Signal Format		Single		Single	
			RF,Video, YC	YPbPr	RF,Video, YC	YPbPr
0	DRHP	DRC H active area position	142	141	111	110
1	DRHS	DRC H active area size	162	162	178	178
2	DRVP	DRC V active area position	37	37	37	37
3	DRVS	DRC V active area size	120	120	120	120

SERVICE DATA LISTS

MID-2 (Continued)

			Twin, Favorite		Memo	
			RF,Video, YC	YPbPr	RF,Video, YC	YPbPr
0	DRHP	DRC H active area position	132	131	142	141
1	DRHS	DRC H active area size	166	166	162	162
2	DRVP	DRC V active area position	54	54	58	58
3	DRVS	DRC V active area size	112	112	110	110
			Index		Twin-Right	Scroll-Small
			RF,Video, YC	YPbPr	RF,Video, YC	RF
0	DRHP	DRC H active area position	139	138	138	143
1	DRHS	DRC H active area size	164	164	166	162
2	DRVP	DRC V active area position	50	50	54	54
3	DRVS	DRC V active area size	114	114	112	112

MID-3 : INPUT)

Reg.No &Name FUNCTION

	MID mode, Wide mode, Input Signal Format		Single			
			480P	720P	YPbPr No Sig.	
0	VDHP	VDO H active area position	109	95	205	
1	VDHS	VDO H active area pixel size	166	108	226	
2	VDVE	VDO V active area even position	37	24	37	
3	VDVS	VDO V active area line size	120	180	56	
			Twin, Favorite			Twin-Right
			480P	1080i	720P	YPbPr No Sig.	RF,Video, SV
0	VDHP	VDO H active area position	128	94	111	179	197
1	VDHS	VDO H active area pixel size	155	150	99	199	215
2	VDVE	VDO V active area even position	53	37	50	24	26
3	VDVS	VDO V active area line size	112	126	168	56	56
			Memo				
			480P	1080i	720P	YPbPr No Sig.	
0	VDHP	VDO H active area position	136	102	115	179	
1	VDHS	VDO H active area pixel size	152	147	98	199	
2	VDVE	VDO V active area even position	57	44	58	24	
3	VDVS	VDO V active area line size	110	123	164	56	
			Index				Index-Small
			480P	1080i	720P	YPbPr No Sig.	RF
0	VDHP	VDO H active area position	132	99	112	166	204
1	VDHS	VDO H active area pixel size	154	149	99	187	211
2	VDVE	VDO V active area even position	51	34	48	24	26
3	VDVS	VDO V active area line size	113	128	169	56	56
	Input Signal Format						
			RF,Video, S-Video, YPbPr 480		480P	1080i	720P
4	VDVO	VDO V active area line size	0		0	0	0
5	VCPO	VDO V active area odd position	95		70	40	40
6	VCWD	VDO clamp pulse output timing	3		3	3	3
7	VYCD	VDO clamp pulse width	0		0	0	0
8	VSTP	VDO PLL phase ditect stop line count	-		119	160	146
9	VSTT	VDO PLL phase ditect start line count	-		4	0	0
10	VHSC	VDO H sync cycle	130		-	-	-

SERVICE DATA LISTS

MID-5 Enhance Table Data Setting

			RF				YPbPr-480i			
0	P-OP	Table select	0	1	2	3	4	5	6	7
1	MHLY	Main H LPF Y Coefficient select	1	1	1	1	1	1	1	1
2	MHLC	Main H LPF C Coefficient select	3	3	3	3	3	3	3	3
3	MVLY	Main V LPF Y Coefficient select	0	0	0	0	0	0	0	0
4	MVLC	Main V LPF C Coefficient select	0	0	0	0	0	0	0	0
5	MHYR	Main H Enhance. Y Coreing level	1	1	2	1	0	0	0	1
6	MHYL	Main H Enhance. Y Clip level	1	1	1	1	1	1	1	1
7	MHYE	Main H Enhance. Y Enhancement level	7	7	3	3	3	3	3	5
8	MHYC	Main H Enhance. Y Coefficient select	1	1	1	1	1	1	1	1
9	MHCR	Main H Enhance. C Coreing level	0	0	0	0	0	0	0	0
10	MHCL	Main H Enhance. C Clip level	1	1	1	1	1	1	1	1
11	MHCE	Main H Enhance. C Enhancement level	0	0	0	0	0	0	0	0
12	MHCC	Main H Enhance. C Coefficient select	1	1	1	1	1	1	1	1
13	MVYR	Main V Enhance. Y Coreing level	0	0	2	2	0	0	2	2
14	MVYL	Main V Enhance. Y Clip level	1	1	1	0	1	1	1	1
15	MVYE	Main V Enhance. Y Enhancement level	0	0	2	5	0	0	2	5
16	MVCR	Main V Enhance. C Coreing level	0	0	0	0	0	0	0	0
17	MVCL	Main V Enhance. C Clip level	1	1	1	1	1	1	1	1
18	MVCE	Main V Enhance. C Enhancement level	0	0	0	0	0	0	0	0
			YPbPr-480p				Cvideo/Svideo			
0	P-OP	Table select	8	9	10	11	12	13	14	15
1	MHLY	Main H LPF Y Coefficient select	0	0	0	0	1	1	1	1
2	MHLC	Main H LPF C Coefficient select	3	3	3	3	3	3	3	3
3	MVLY	Main V LPF Y Coefficient select	0	0	0	0	0	0	0	0
4	MVLC	Main V LPF C Coefficient select	0	0	0	0	0	0	0	0
5	MHYR	Main H Enhance. Y Coreing level	0	0	0	1	0	0	0	1
6	MHYL	Main H Enhance. Y Clip level	1	1	1	1	1	1	1	1
7	MHYE	Main H Enhance. Y Enhancement level	7	7	3	5	7	7	3	3
8	MHYC	Main H Enhance. Y Coefficient select	1	1	1	1	1	1	1	1
9	MHCR	Main H Enhance. C Coreing level	0	0	0	0	0	0	0	0
10	MHCL	Main H Enhance. C Clip level	1	1	1	1	1	1	1	1
11	MHCE	Main H Enhance. C Enhancement level	0	0	0	0	0	0	0	0
12	MHCC	Main H Enhance. C Coefficient select	1	1	1	1	1	1	1	1
13	MVYR	Main V Enhance. Y Coreing level	0	0	2	2	0	0	2	2
14	MVYL	Main V Enhance. Y Clip level	1	1	1	1	1	1	1	1
15	MVYE	Main V Enhance. Y Enhancement level	0	0	2	5	0	0	2	5
16	MVCR	Main V Enhance. C Coreing level	0	0	0	0	0	0	0	0
17	MVCL	Main V Enhance. C Clip level	1	1	1	1	1	1	1	1
18	MVCE	Main V Enhance. C Enhancement level	0	0	0	0	0	0	0	0

On-Screen Display

Reg.No	&Name	FUNCTION	
0	HPOS	OSD horizontal position	
1	HPOF	Horizontal position for Favorite mode	
2	VPOS	OSD vertical position	4
3	VPOT	Vertical position for P&Pmode	40

SERVICE DATA LISTS

SNNR

Reg.No	&Name	FUNCTION					
0	SNNR	SNNR data setting	0	1	2	3	
1	SNFX	Selection of SNNR data setting	0				
2	WSLT	Noise level detection data thresholds for SNNR data	0 ~ 30	31 ~ 62	63 ~ 126	127 ~ 255	
		SNNR Settings based on WSL Data					
	SNNR=0/1/2/3		0	1	2	3	
3	CPFG	Related to 3D-COMB / #19 YPFG settings	0	1	2	3	SNNR data is used for the (-) offset setting.
4	CPFT	Related to 3D-COMB / #18 YPFT settings	0	0	0	0	
5	CCOR	Related to 3D-COMB / #20 VHCO settings	0	1	1	1	SNNR data is used for the direct setting.
6	CHCG	Related to 3D-COMB /#21 VHCG settings	1	1	1	1	
7	CAPG	Related to 3D-COMB / #16 VAPG settings	0	0	0	0	
8	3SHP	Related to CXA2103 / #6 SHAP settings	0	1	2	3	
9	MIDD	Related to CXA2150P-3 / #19 MIDE settings	0	0	0	0	
10	5SHP	Related to CXA2150P-4 / #4 USHP settings	0	1	3	4	SNNR data is used for the (-) offset setting.
11	5YF1	Related to CXA2150P-3 / #10 F1LV settings	0	1	2	3	
12	5CDS	Related to CXA2150P-3 / #11 CDSP settings	0	0	0	0	
13	5LTI	Related to CXA2150P-3 / #12 LTLV settings	0	0	0	0	
14	5CTI	Related to CXA2150P-3 / #14 CTLV settings	0	0	0	0	
15	5VML	Related to CXA2150P-3 / #1 UVML settings	0	0	0	0	
16	5YMC	Related to CXA2150P-3 / #3 VMCR settings	0	1	2	3	SNNR data is used for the (+) offset setting.

ID-1 Detection

Reg.No	&Name	FUNCTION	
0	XJGL	XJGLK:Setting for memorizing or not the ID-1 detection status	0
1	LNJI	LNJI:Setting for the multi/single-line ID-1 detection	0

Closed Caption Display & Parental Control

Reg.No	&Name	FUNCTION	
0	HPRM	Horizontal position of CCD	
1	HPRS	Horizontal position of CCD	
2	RND	OSD rounding control	1
3	CCDI	Interruption control	3
4	CRIP	CRI count & parity count	4
5	CRIT	Charge/Discharge timing control for slice voltage level	0
6	CHMK	Horizontal mask width	42
7	FPOL	Field polarity selection	1
8	LANG		0
9	DATA	Switch for CCD service/test data	0
10	VCHIP	Selection of Vchip controls	1

OPTIONS

Reg.No	&Name	FUNCTION	
0	DLY1	Power-On to RLY timing = DLY1 x 50ms	2
1	DLY2	Power-On Mute timing =DLY2 x 50ms	12
2	DLY3	Relay-On to start Bus communication	12
3	AGC		255
4	PCMX		63
5	BRMX		63
6	RAMW		0
7	SOFF		0

SERVICE DATA LISTS

PJ Engine								
ITEM No.	ITEM Name	Contents	min	max	Normal	Zoom	W Zoom	HD
0	FDIS	Switch of display for fine adjustment data	0	1	-			
1	COPY	Service copy adjustment	0	1	-			
2	ALCP	Service all copy adjustment	0	1	-			
3	OSDH	Osd horizontal position of PJED service menu	1	255	22			
4	OSDV	Osd vertical position of PJED service menu	1	255	100	120	100	60
5	FVSL	Start position of fine adjustment	0	15	0	14	15	0
6	FVSP	Start line of fine adjustment	0	255	3	21	25	53
7	V1DL	Value of V1 delay	0	255	1	139	60	1
8	V1CU	Value of V1 count up	0	4095	454	598	506	387
9	V1OH	Value of V1 offset upper data	0	255	5	5	5	79
10	V1OL	Value of V1 offset lower data	0	255	0	0	0	0
11	OEVP	Odd/Even select positioin	0	4095	1056			
12	COHP	Horizontal phase for rough adjustment	0	4095	0			
13	34CS	Start center clamp positioin of H3 and H4 pulse	0	31	14			
14	34CW	Width center clamp position of H3 and H4 pulse	0	31	0			
15	FIHP	Horizontal phase for fine adjustment	0	4095	1104			
16	TPHP	Horizontal phase for test pattern	0	4095	69			
17	TPVP	Vertical phase for test pattern	0	255	55	111	79	15
18	DFHP	Horizontal phase for dynamic focus	0	4095	250			
19	DFHG	Value of horizontal parabola wave for dynamic focus	-128	127	-70	-70	-70	-70
20	DFVG	Value of vertical parabola wave for dynamic focus	-128	127	-65	-65	-65	-65
21	DFDC	Value of center for dynamic focus	-128	127	127	127	127	127
22	DFV1	Value of V1 saw wave for dynamic focus	-128	127	-50	-50	-50	-50
23	SDHP	Compensation of horizontal phase for shading	0	4095	422			
24	SDH1	Value of horizontal saw wave for dynamic focus	-128	127	127	127	127	127
25	RVCS	Start positioin of Red vertical clamp	0	31	0			
26	RVCW	Width of Red vertical clamp	0	31	0			
27	GVCS	Start position of Green vertical clamp	0	31	0			
28	GVCW	Width of Green vertical clamp	0	31	0			
29	BVCS	Start position of Blue vertical clamp	0	31	0			
30	BVCW	Width of Blue vertical clamp	0	31	0			
31	RHCS	Start position of Red horizontal clamp	0	31	0			
32	RHCW	Width of Red horizontal clamp	0	31	0			

SERVICE DATA LISTS

PJ Engine								
ITEM No.	ITEM Name	Contents	min	max	Normal	Zoom	W Zoom	HD
33	GHCS	Start position of Green horizontal clamp	0	31	0			
34	GHCW	Width of Green horizontal clamp	0	31	0			
35	BHCS	Start position of Blue horizontal clamp	0	31	0			
36	BHCW	Width of Blue horizontal clamp	0	31	0			
37	BDVU	Vertical position for border line 1	0	2047	28	21	12	49
38	BDVL	Vertical position for border line 2	0	2047	900	683	820	1039
39	BDHL	Horizontal position for border line 1	0	2047	148			
40	BDHR	Horizontal position for border line 2	0	2047	1262			
41	HBLD	Horizontal phase for output of H.Blank out	0	4095	0			
42	HBLW	Width for output of H.Blank out	0	4095	0			
43	PWM2	PWM2 output width setting of Regi IC	0	4095	730			
44	COGV	Green vertical center offset data for Auto Regi.	-128	127	0			
45	CORV	Red vertical center offset data for Auto Regi.	-128	127	0			
46	COBV	Blue vertical center offset data for Auto Regi.	-128	127	0			
47	COGH	Green horizontal center offset data for Auto Regi	-128	127	0			
48	CORH	Red horizontal center offset data for Auto Regi.	-128	127	0			
49	COBH	Blue horizontal center offset data for Auto Regi.	-128	127	0			
50	SOGV	Green vertical skew offset data for Auto Regi.	-128	127	0			
51	SORV	Red vertical skew offset data for Auto Regi.	-128	127	0			
52	SOBV	Blue vertical skew offset data for Auto Regi.	-128	127	0			
53	SOGH	Green horizontal skew offset data for Auto Regi.	-128	127	0			
54	SORH	Red horizontal skew offset data for Auto Regi.	-128	127	0			
55	SOBH	Blue horizontal skew offset data for Auto Regi.	-128	127	0			
56	ZOGH	Green horizontal size offset data for Auto Regi.	-128	127	0			
57	ZORH	Red horizontal size offset data for Auto Regi.	-128	127	0			
58	ZOBH	Blue horizontal size offset data for Auto Regi.	-128	127	0			
59	LOGH	Green horizontal linearity offset data for Auto Regi.	-128	127	0			
60	LORH	Red horizontal linearity offset data for Auto Regi.	-128	127	0			
61	LOBH	Blue horizontal linearity offset data for Auto Regi.	-128	127	0			
62	ERR	Auto Regi. Error code	0	-	0			
63	ADTM	A/D data input timing of Auto Regi.	0	127	144			
64	VUP	Auto Regi. Pattern Upper vertical position	0	2047	50			
65	VUPM	Auto Regi. Pattern Upper middle vertical position	0	2047	0			
66	VMID	Auto Regi. Pattern Middle vertical position	0	2047	512			

SERVICE DATA LISTS

PJ Engine

ITEM No.	ITEM Name	Contents	min	max	16:9			
					Normal	Zoom	W Zoom	HD
67	VLOM	Auto Regi. Pattern Lower middle vertical position	0	2047	0			
68	VLOW	Auto Regi. Pattern Lower vertical position	0	2047	975			
69	HLE	Auto Regi. Pattern left horizontal position	0	4095	90			
70	HLEM	Auto Regi. Pattern left middle horizontal position	0	4095	0			
71	HMID	Auto Regi. Pattern middle horizontal position	0	4095	655			
72	HRIM	Auto Regi. Pattern right middle horizontal position	0	4095	0			
73	HRIV	Auto Regi. Pattern right horizontal position	0	4095	1215			
74	SFTF	Switch of shift fast	0	1	0			
75	ACTL	Account timer counter lower byte	0	-	0			
76	ACTH	Account timer counter upper byte	0	-	0			
77	SLSW	Auto Regi adjustment item select	0	3	3			
78	VB2S		0	1023	0	0	0	0
79	VB2W		0	1023	49	106	68	9
80	VB3S		0	1023	521	464	502	561
81	VB3W		0	1023	42	99	61	1

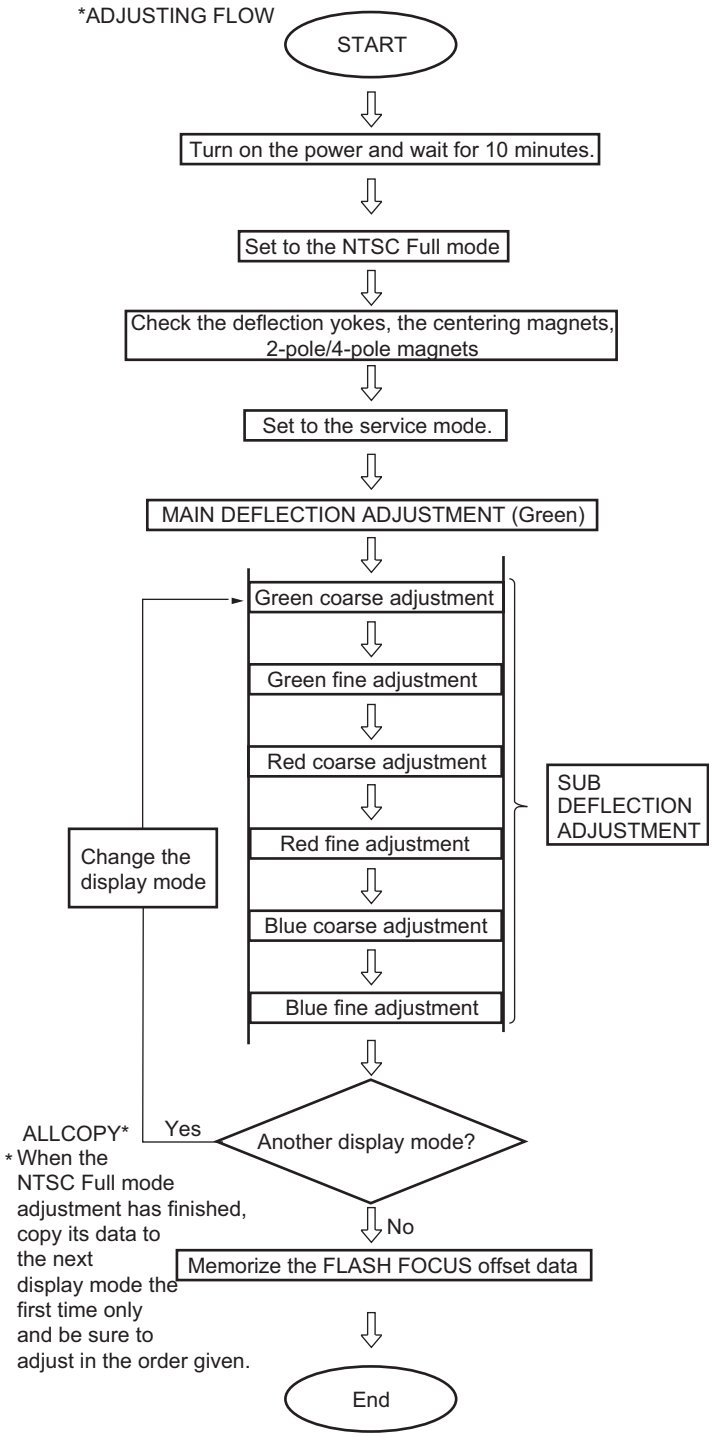
ITEM No.	ITEM Name	Contents	min	max	16:9					
					Green H	Green V	Blue H	Blue V	Red H	Red V
82	CENT	Normal/Full Coarse Center Adjustment	-512	511						
83	SKEW	Normal/Full Coarse Skew Adjustment	-512	511						
84	SIZE	Normal/Full Coarse Size Adjustment	-512	511						
85	LIN	Normal/Full Coarse Linearity Adjustment	-512	511						
86	KEY	Normal/Full Coarse Key Adjustment	-512	511	-		-		-	
87	PIN	Normal/Full Coarse Pin Adjustment	-512	511						
88	MLIN	Normal/Full Coarse Middle Linearity Adjustment	-512	511		-		-		-
89	MSIZ	Normal/Full Coarse Middle Size Adjustment	-512	511		-		-		-
82	CENT	Zoom Coarse Center Adjustment	-512	511						
83	SKEW	Zoom Coarse Skew Adjustment	-512	511						
84	SIZE	Zoom Coarse Size Adjustment	-512	511						
85	LIN	Zoom Coarse Linearity Adjustment	-512	511						
86	KEY	Zoom Coarse Key Adjustment	-512	511	-		-		-	
87	PIN	Zoom Coarse Pin Adjustment	-512	511						
88	MLIN	Zoom Coarse Middle Linearity Adjustment	-512	511		-		-		-
89	MSIZ	Zoom Coarse Middle Size Adjustment	-512	511		-		-		-
82	CENT	Wide Zoom Coarse Center Adjustment	-512	511						
83	SKEW	Wide Zoom Coarse Skew Adjustment	-512	511						
84	SIZE	Wide Zoom Coarse Size Adjustment	-512	511						
85	LIN	Wide Zoom Coarse Linearity Adjustment	-512	511						
86	KEY	Wide Zoom Coarse Key Adjustment	-512	511	-		-		-	
87	PIN	Wide Zoom Coarse Pin Adjustment	-512	511						
88	MLIN	Wide Zoom Coarse Middle Linearity Adjustment	-512	511		-		-		-
89	MSIZ	Wide Zoom Coarse Middle Size Adjustment	-512	511		-		-		-
82	CENT	HD Coarse Center Adjustment	-512	511						
83	SKEW	HD Coarse Skew Adjustment	-512	511						
84	SIZE	HD Coarse Size Adjustment	-512	511						
85	LIN	HD Coarse Linearity Adjustment	-512	511						
86	KEY	HD Coarse Key Adjustment	-512	511	-		-		-	
87	PIN	HD Coarse Pin Adjustment	-512	511						
88	MLIN	HD Coarse Middle Linearity Adjustment	-512	511		-		-		-
89	MSIZ	HD Coarse Middle Size Adjustment	-512	511		-		-		-

SERVICE DATA LISTS

PJ Engine			
Contents	min	max	data
Normal/Full Red Horizontal Fine Data	-128	127	0
Normal/Full Red Vertical Fine Data	-128	127	0
Normal/Full Green Horizontal Fine Data	-128	127	0
Normal/Full Green Vertical Fine Data	-128	127	0
Normal/Full Blue Horizontal Fine Data	-128	127	0
Normal/Full Blue Vertical Fine Data	-128	127	0
Normal/Full Zoom Red Horizontal Fine Data	-128	127	0
Zoom Red Vertical Fine Data	-128	127	0
Zoom Green Horizontal Fine Data	-128	127	0
Zoom Green Vertical Fine Data	-128	127	0
Zoom Blue Horizontal Fine Data	-128	127	0
Zoom Blue Vertical Fine Data	-128	127	0
Wide Zoom Red Horizontal Fine Data	-128	127	0
Wide Zoom Red Vertical Fine Data	-128	127	0
Wide Zoom Green Horizontal Fine Data	-128	127	0
Wide Zoom Green Vertical Fine Data	-128	127	0
Wide Zoom Blue Horizontal Fine Data	-128	127	0
Wide Zoom Blue Vertical Fine Data	-128	127	0
HD Red Horizontal Fine Data	-128	127	0
HD Red Vertical Fine Data	-128	127	0
HD Green Horizontal Fine Data	-128	127	0
HD Green Vertical Fine Data	-128	127	0
HD Blue Horizontal Fine Data	-128	127	0
HD Blue Vertical Fine Data	-128	127	0

ID			
Reg.No	&Name	FUNCTION	
0	ID0	Selection of OSD languages & color systems	89
1	ID1	Selection of composite & s-video inputs	127
2	ID2	Selection of audio-related controls	239
3	ID3	Selection of basic system settings	98
4	ID4	Selection of basic system settings	203
5	ID5	Selection of advanced system settings	177
6	ID6	Selection of sub picture related settings	54
7	ID7	Selection of some reserved settings	24

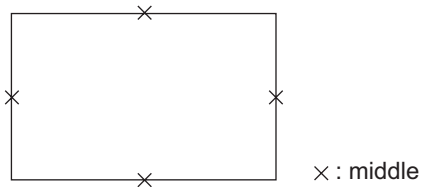
2-12.REGISTRATION ADJUSTMENT



2-12-1.SETUP FOR ADJUSTMENT

MARKING

- At the 4 sides of the screen, use a tape measure to locate the middle.



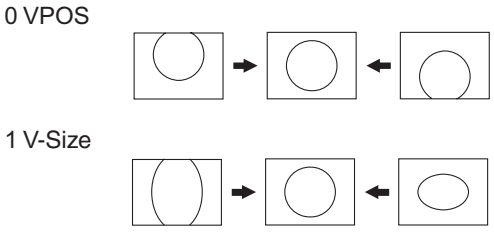
DATA SETTING

1. Set NTSC Full mode.
2. Enter the service mode, and select “PJE”.

2-12-2.MAIN DEFLECTION ADJUSTMENT

NOTE: Before this adjustment, refer to section 2-11 for PJE input data items #78-85.

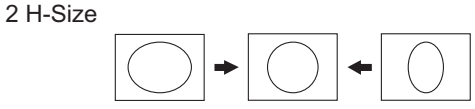
1. Cover the red and blue CRT lenses with lens caps to allow only green to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).
2. Enter the monoscope signal and set to NTSC Full mode.
3. Enter the service mode, and select “2150D-1”.
4. Adjust “0 VPOS” and “1 VSIZ” so that the picture is displayed in the center of the screen.
5. Adjust “2VSZ0” for 1080i vertical size adjustment.



6. Select “2150D-2” and adjust “2 H-Size” so that the picture size is within the specification.

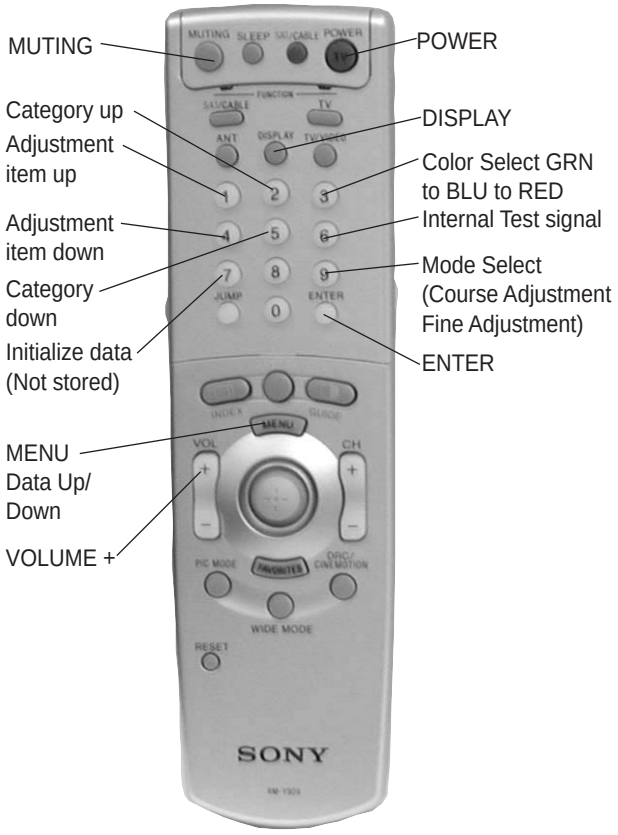
SPEC Overscan Spec. = 9%

Input Signal	H SIZE	V SIZE
Monoscope	15.6 ± 0.2 sq.	11.5 ± 0.2 sq.



7. Copy the data of the NTSC Full mode to the other display mode and, if necessary, adjust in the other mode.

2-12-3.OPERATION METHOD FOR PROJECTOR ENGINE MODE



RM-Y909

1. FUNCTION OF KEYS ON COMMANDER

① Changes adjustment item. (Item # moves up)
Marker moves clockwise from center to outside.
(In Fine Adjustment mode)

④ Changes adjustment item. (Item # moves down)
Marker moves counter clockwise from outside to center.
(In Fine Adjustment mode)

② Changes adjustment category.
(Category # moves up)

⑤ Changes adjustment category.
(Category # moves down)

Joystick Changes data value. (Up or down)
Marker moves clockwise from center
(up, down, right, and then left) to outside.
(In Fine Adjustment mode)

③ Changes adjustment color.
GRN →BLU →RED

⑥ Displays or changes internal test signals.
crosshatch + external signal →
crosshatch + borderline →
crosshatch only →
dot only → off

⑨ Switches adjustment mode.
Coarse adjustment model →
Fine adjustment mode

Press Switches marker moving method.

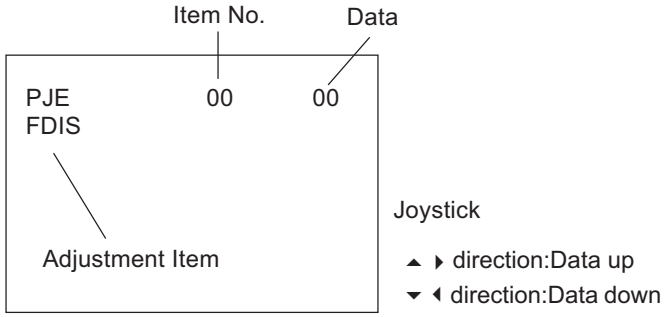
Joystick (In Fine Adjustment mode)
Joystick ▲ ▼ ◀ ▶ keys → **1** and **4** buttons

Commander Function

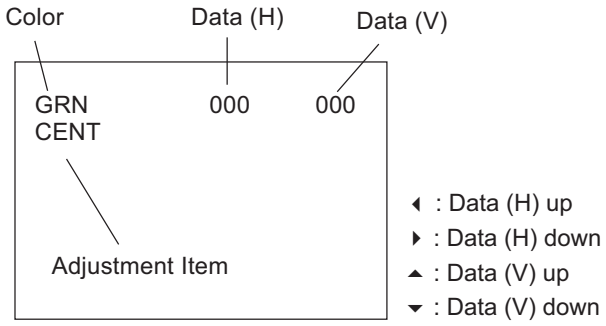
Buttons	Mode	Description
0 + ENTER	READ	Reads data to NVM.
MUTING+ENTER	WRITE	Writes data from NVM.
7 + ENTER	PJE INITIAL	Service data initialization. Not stored. (Be sure not to use usually)

2. OPERATION METHOD FOR COARSE ADJUSTMENT

1. Enter the service mode and select “PJE”.
2. Press the “1” or “4” button on the remote commander to select the item, and then use the joystick to change the data.



3. Select “GRN CENT”. When BLU or RED is displayed, press the “3” button on the remote commander to change the adjustment color in the order of GRN →BLU →RED.
4. In GRN, BLU, or RED mode, move the joystick ▲ or ▼ to change the data in vertical direction, or ◀ or ▶ to change the data in a horizontal direction.



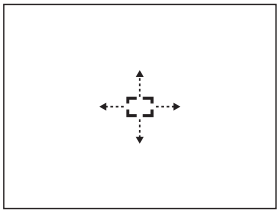
5. Before returning to the service mode, press the “MUTING” + “ENTER” buttons on the remote commander to write the data. (You must complete step 5 to write the data. If you omit step 5 the set data is returned to the data prior to the adjustment.)

3. OPERATION METHOD FOR FINE ADJUSTMENT

1. Enter the service mode and select “PJE”.
2. Select FDIS and set the data to “01” so that the data at each position can be displayed in fine adjustment mode.

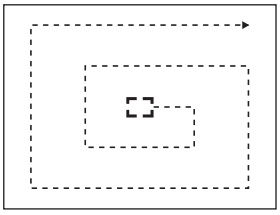
3. Press the “9” button on the remote commander and fine adjustment mode will be active where a green marker appears in the center of the screen. (In the case of GRN mode)
4. Press down on the joystick, and the marker color will be alternately switched between green (GRN mode) and white.
5. Press the “1” or “4” button on the remote commander, or use the joystick to move the marker to the position to be adjusted, where fine adjustment can be made.

* When the marker color is white:
(in this case, fine adjustment is disabled)



Use the joystick to move the marker up, down, left, or right.

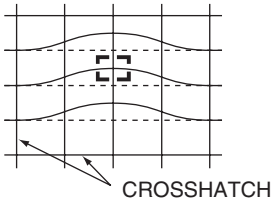
* When the marker color is green:
(GRN mode)



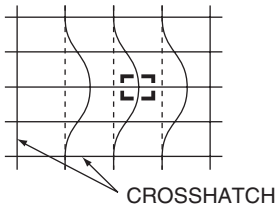
① : Moves the marker clockwise from the center to the outside.
④ : Moves the marker counter clockwise from the outside to the center.

* Fine adjustment can be made on the basis of a marker position using the joystick to move ▲ ▼ ◀ or ▶.

Move joystick ▲ direction



Move joystick ▶ direction



6. Press the “9” button on the remote commander to return to coarse adjustment mode.

2-13. PJE ADJUSTMENT (SUB DEFLECTION ADJUSTMENT)

Adjustment item	Adjustment type		
	G	R	B
	H/V*	H/V*	H/V*
CENT	O/O	O/O	O/O
SKEW	O/O	O/O	O/O
SIZE	O/O	O/O	O/O
LIN	O/O	O/O	O/O
KEY	—/O	—/O	—/O
PIN	O/O	O/O	O/O
MLIN	O/—	O/—	O/—
MSIZ	O/—	O/—	O/—

* H = Horizontal V = Vertical O = Yes — = No

Note: If the value is over the limit value, adjust these in the fine adjustment mode.

Coarse Data Limit Value:

CENT H	35 ± 170V
CENT V	20 ± 170V
SIZE H	-75 MAX
BLUE H LIN	-425 MIN
RED H LIN	425 MAX

2-13-1. ADJUSTMENT FOR NTSC FULL MODE

- The adjustment should be done in the numerical order given.

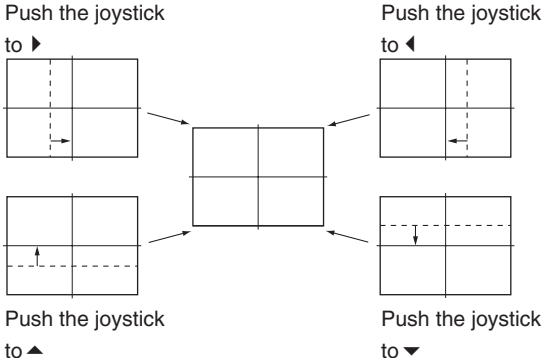
1) GREEN ADJUSTMENT

1. Cover the red and blue CRT lenses with lens caps to allow only green to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).

Note: If lens caps are unavailable, you can cut off the unnecessary color beams by controlling the service mode 2150P-2 1 RGBS.

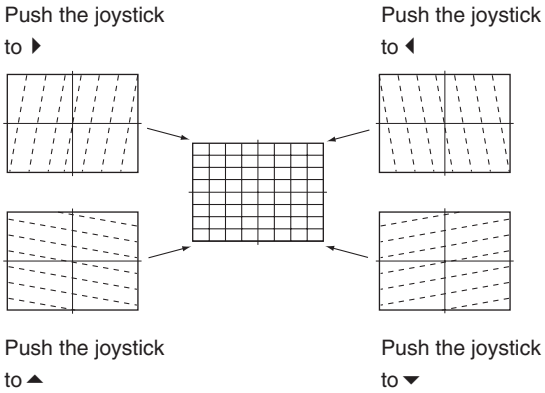
2. Enter the monoscope signal to set.
3. Select the PJE mode.
4. Press the “6” button on the remote commander to display the internal test signal (crosshatch).
5. Select “GRN CENT”, and adjust so that the pictures coincide in the center of screen.

GRN CENT (Horizontally/Vertically)



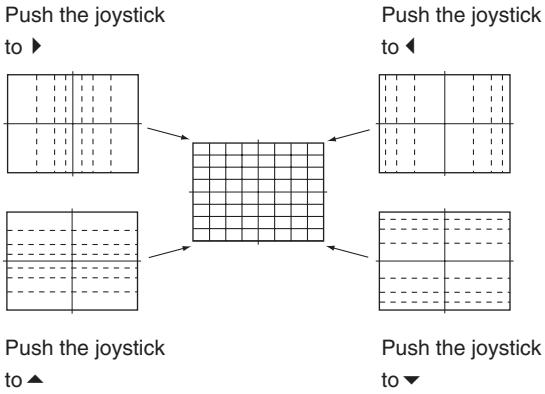
7. Select “GRN SKEW”, and correct the tilt of horizontal lines and vertical lines.

GRN SKEW (Horizontally/Vertically)



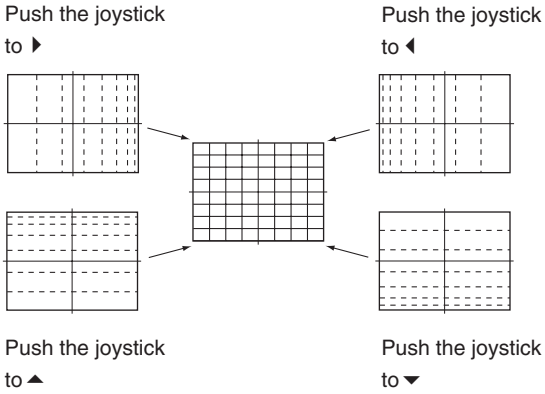
8. Select “GRN SIZE”, and adjust so that each distance from center to left end and to right end is equal. Adjust so that each distance from center to top and to bottom is equal.

GRN SIZE (Horizontally/Vertically)



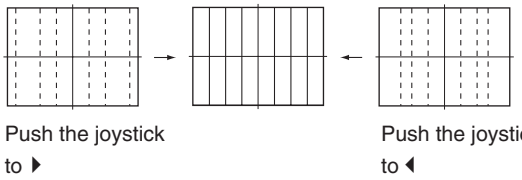
9. Select “GRN LIN”, and adjust so that each space at the right end and at the left end of screen is equal. Adjust so that each space at the top and at the bottom of screen is equal.

GRN LIN (Horizontally/Vertically)



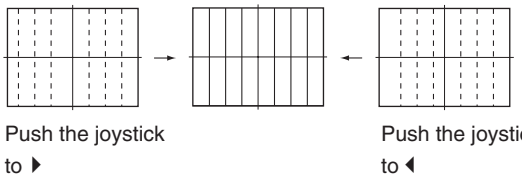
10. Select “GRN MSIZ”, and correct the space intervals for the horizontal section so the screen is equal.

GRN MSIZ (Horizontally)



11. Select “GRN MLIN”, and correct the sizes of the horizontal line so the center of the screen is symmetrical left and right.

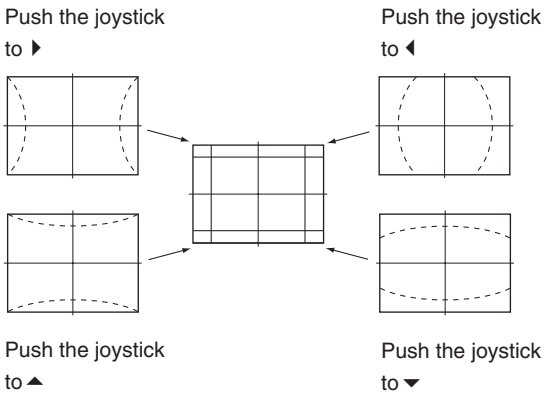
GRN MLIN (Horizontally)



Note: The SIZE and LIN, MSIZ and MLIN adjustments affect each other. If necessary, adjust these mutually.

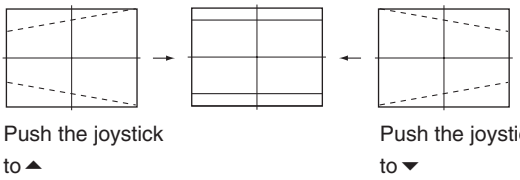
12. Select “GRN PIN”, and adjust so that right and left vertical lines on the screen become straight. Adjust so that upper and lower horizontal lines on the screen become straight.

GRN PIN (Horizontally/Vertically)



13. Select “GRN KEY”, and adjust so that upper and lower horizontal lines on the screen become parallel.

GRN KEY (Vertically)



Note: The VPIN and KEY adjustments affect each other. If necessary, adjust these mutually.

14. Press the “9” button on the remote commander to enter fine adjustment mode.

15. Make the fine adjustment so that horizontal lines and vertical lines become straight.
16. Press the “9” button on the remote commander to return to coarse adjustment mode.

2) RED ADJUSTMENT

1. Cover the blue CRT lens with a lens caps to allow only the green and red to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).
2. Press the “3” button on the remote commander to select RED mode.
3. Adjust the following items so that red lines overlap with green lines.
   - RED CENT (horizontally/vertically)
   - RED SKEW (horizontally/vertically)
   - RED SIZE (horizontally/vertically)
   - RED LIN (horizontally/vertically)
   - RED MSIZ (horizontally)
   - RED MLIN (horizontally)
   - RED PIN (horizontally/vertically)
   - RED KEY (vertically)
4. Press the “9” button on the remote commander to enter fine adjustment mode.
5. Make the fine adjustment so that horizontal lines and vertical lines overlap with green lines.
6. Press the “9” button on the remote commander to return to coarse adjustment mode.

Note: If lens caps are unavailable, you can cut off the unnecessary color beams by controlling the service mode 2150P-2 1 RGBS.

3) BLUE ADJUSTMENT

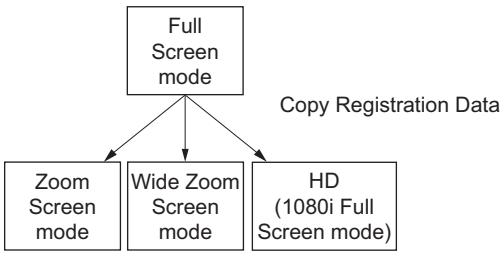
1. Remove the lens cap from the blue picture lens to display all colors.
2. Press the “3” button on the remote commander to select BLU mode.
3. Adjust the following items so that blue lines overlap with green and red lines.
   - BLU CENT (horizontally/vertically)
   - BLU SKEW (horizontally/vertically)
   - BLU SIZE (horizontally/vertically)
   - BLU LIN (horizontally/vertically)
   - BLU MSIZ (horizontally)
   - BLU MLIN (horizontally)
   - BLU PIN (horizontally/vertically)
   - BLU KEY (vertically)
4. Press the “9” button on the remote commander to enter fine adjustment mode.
5. Make the fine adjustment so that horizontal lines and vertical lines overlap with green and red lines.
6. Press the “9” button on the remote commander to return `to coarse adjustment mode.

4) REGISTRATION DATA WRITING

1. After completing each adjustment of green, blue, and red for the NTSC Full mode press the “MUTING”+ “ENTER” buttons on the remote commander to write the registration data to the NVM.

2-13-2.COPYING ALL REGISTRATION DATA TO OTHER MODES

1. Make sure that the adjustment for NTSC Full mode are complete and the data has already been written.
2. Select the PJE mode.
3. Select ALCP and set the data to “01”, and press the “MUTING”+“ENTER” buttons on the remote commander.
4. The data from the NTSC Full mode is copied to all other modes.



5. Check in the other modes and adjust as demands.
   Be sure to write data in each mode.

2-14. AUTO CONVERGENCE OFFSETS

IMPORTANT
This adjustment must be performed after registration adjustment or after readjustment for any reason!

Once registration in all modes is satisfactory, do the following:

1. Darken the room environment near the set.
2. Enter the monoscope signal to set the NTSC Full mode.
3. Select the PJE mode.
4. To automatically store the offset values, press the “FLASH FOCUS” button on the front panel of the set.
   (The offset value is now stored)
5. Select “ERR” of PJE mode.
   Confirm ERR is “00”.
   If ERR is not “00”, recheck. (Refer to section 2-15)
6. Exit the service mode.

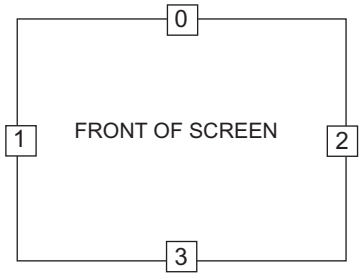
2-15.AUTO REGISTRATION ERROR CODES

If an error code is displayed after the set has been correctly adjusted, check the following items: position, tilt and sizing. If any of these adjustments are off, even slightly, the auto-registration pattern will not hit the four sensors properly. This occurs when the internal generator patterns are being flashed on the screen for the sensors to read. Therefore, auto registration (called auto convergence) cannot operate properly, causing an error code to be displayed. In order for this function to operate properly correct position, tilt, and size must be adjusted properly.

ERROR CODE LIST

ERROR CODE	DESCRIPTION	NOTE
00	No Error	
10	Sensor 0 low output	Check sensor 0, connection/wiring, circuit, and pattern position (are patterns hitting sensor?) adjust "64 VUP" if necessary.
11	Sensor 1 low output	Check sensor 1, connection/wiring, circuit, and pattern position (are patterns hitting sensor?) adjust "69 HLE" if necessary.
12	Sensor 2 low output	Check sensor 2, connection/wiring, circuit, and pattern position (are patterns hitting sensor?) adjust "73 HRIV" if necessary.
13	Sensor 3 low output	Check sensor 3, connection/wiring, circuit, and pattern position (are patterns hitting sensor?) adjust "68 VLOW" if necessary.
20	Sensor 0 high output	Check sensor 0 and circuit.
21	Sensor 1 high output	Check sensor 1 and circuit.
22	Sensor 2 high output	Check sensor 2 and circuit.
23	Sensor 3 high output	Check sensor 3 and circuit.
30	V CENT or SKEW adjustment loop overflow	Check "66 VMID" data and check registration condition.
31	H CENT or SKEW adjustment loop overflow	Check "71 HMID" data and check registration condition.
32	H LIN or SIZE adjustment loop overflow	Check "71 HMID" data and check registration condition.
40	V CENT regi data overflow	Check "66 VMID" data and confirm V CENT data (all modes) is not near 511.
41	H CENT regi data overflow	Check "71 HMID" data and confirm H CENT data (all modes) is not near 511.
42	V SKEW regi data overflow	Check "66 VMID" data and confirm V SKEW data (all modes) is not near 511.
43	H SKEW regi data overflow	Check "71 HMID" data and confirm H SKEW data (all modes) is not near 511.
44	H LIN regi data overflow	Check "71 HMID" data and confirm H CENT data (all modes) is not near 511.
45	H SIZE regi data overflow	Check "71 HMID" data and confirm H CENT data (all modes) is not near 511.
50	V CENT regi data overdrow	Check "66 VMID" data and confirm V CENT data (all modes) is not near -512.
51	H CENT regi data overdrow	Check "71 HMID" data and confirm H CENT data (all modes) is not near -512.
52	V SKEW regi data overdrow	Check "66 VMID" data and confirm V SKEW data (all modes) is not near -512.
53	H SKEW regi data overdrow	Check "71 HMID" data and confirm H SKEW data (all modes) is not near -512.
54	H LIN regi data overdrow	Check "71 HMID" data and confirm H CENT data (all modes) is not near -512.
55	H SIZE regi data overdrow	Check "71 HMID" data and confirm V CENT data (all modes) is not near -512.
60	H or V CENT offset overflow	Check "71 HMID" and "66 VMID" data and check registration condition.
61	H or V SKEW offset overflow	Check SKEW adjustment.
62	H SIZE or LIN offset overflow	Check "71 HMID" data, check "66 VMID" data, and check SIZE and LIN adjustment.
70	H or V CENT offset overdrow	Check "71" HMID" data and check "66 VMID" data.
71	H or V SKEW offset overdrow	Check SKEW adjustment.
72	H SIZE or LIN offset overdrow	Check "69 HLB" data, check "73 HRIV" data, and check SIZE and LIN adjustment.
80	SIZE Limit Error	Check that H SIZE data is negative and not near zero.

SENSOR POSITIONS

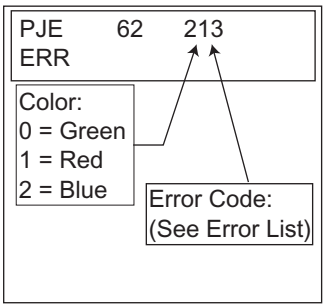


0: UPPER SENSOR
1: LEFT SENSOR
2: RIGHT SENSOR
3: LOWER SENSOR

• ERROR CODE SCREEN DISPLAY

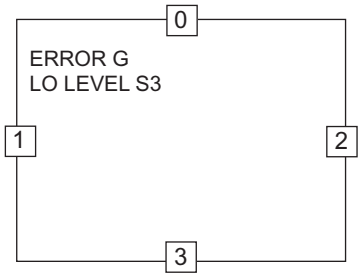
Error codes in normal (customer) mode are not displayed. You must enter PJED service mode to see the error code.

AUTO REGI ERROR CODE FORMAT
ERROR EXAMPLE



Example Blue Low Level Sensor 3
0 = Green
1 = Red
2 = Blue

When executing flash focus in service mode, the error will be displayed in text format.



SECTION 3: SAFETY-RELATED ADJUSTMENTS

D BOARD

3-1. HV REGULATION CIRCUIT CHECK AND ADJUSTMENT

When replacing the following components marked with a ◪ on the schematic diagram always check the HV regulation, and if necessary re-adjust.

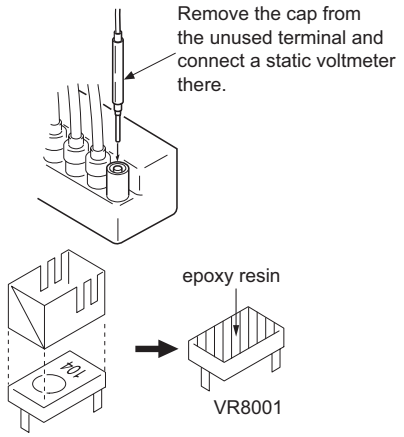
Part Replaced (◪)	Adjustment (⋈)
A BOARD: C8079, C8083, C8090, C8129, D8013, D8015, D8038, D8043, IC8006, Q8021, R8055, R8099, R8102, R8128, R8129, R8131, R8139, R8140, R8142, R8153, R8163, R8223, R8230, T8004 (LOT), T8005 (FBT), HV Block, D Board	**HV REGULATOR** VR8001

OPERATION CHECK

1. Receive the all white signal.
2. Set PIC MAX/BRT CENT.
3. Confirm that the voltage between CN8015 ① PIN and GND is less than 7.80VDC.

HV REGULATION ADJUSTMENT

1. Connect a HV static voltmeter to the unconnected plug of the high-voltage block.
2. Power on the set.
3. Receive the all white signal.
4. Set PIC MAX/BRT CENT.
5. Confirm that the static voltmeter reading is 31.0 ± 0.4V.
   If not, adjust with VR8001 to the specified value.
6. After adjustment, put the VR cover on VR8001 (as shown below) and apply sufficient amount of epoxy resin around VR8001.



3-2. HV HOLD DOWN CIRCUIT OPERATION CHECK AND ADJUSTMENT

When replacing the following components marked with a ◪ on the schematic diagram always check the hold-down voltage and re-adjust when necessary.

Part Replaced (◪)	Adjustment (⋈)
A BOARD: C8054, C8086, C8088, C8100, C8104, C8188, C8123, C8124, D8019, D8020, D8022, D8028, D8036, FB8001, IC8008, Q8035, Q8038, R8035, R8043, R8159, R8166, R8171, R8196, R8201, T8004 (LOT), T8005 (FBT), HV Block, D Board	**HV HOLD DOWN** VR8002

OPERATION CHECK

1. Receive the dot signal.
2. Set PIC MIN/BRT MIN.
3. Confirm that the voltage between cathode of D8038 (JW171) and GND is more than 23.0V DC.
4. Using an external DC Power supply, apply the voltage shown below between cathode of D8038 (JW171) on “D” and GND, then confirm that the HV-Prot circuit works. (Raster disappears)
   Apply DC voltage: Less than 29.05V DC.

HV HOLD-DOWN ADJUSTMENT

1. Connect a HV static voltmeter to the unconnected plug of the high-voltage block.
2. Power on the set.
3. Connect an external 10kΩ VR at CN8015 and adjust this VR so that the high voltage is 34.50kV.
4. Adjust VR8002 to the point that the HV-Prot circuit works (Raster disappears) at 34.50 ± 0.50kV reading on the static voltmeter.
5. After adjustment, put the VR cover on VR8002 and apply sufficient amount of epoxy resin around VR8002 as the same manner for VR8001.

G BOARD

3-3. +B MAX VOLTAGE CONFIRMATION

The following adjustments should always be performed when replacing IC501, R5032.

1. Supply 130VAC to variable autotransformer.
2. Receive dot signal pattern and set the PICTURE and BRIGHTNESS settings to their minimum.
3. Confirm the voltage of TP +B 135V is less than 137.0Vdc.
4. If step 3 is not satisfied, replace IC501 and repeat steps 1-3.

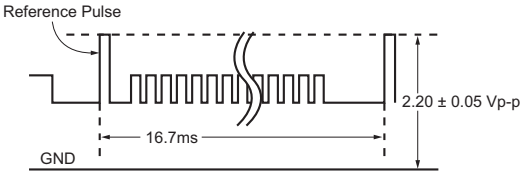
3-4. +B OVP CONFIRMATION

1. Add to low voltage power supply between to TP5001 and ground.
2. Supply 120VAC to variable autotransformer.
3. Power on the Set and receive dot signal pattern.
4. Set the PICTURE and BRIGHTNESS settings.
5. Check the OVP is activated.
   Operate :less than 2.50V

SECTION 4: CIRCUIT ADJUSTMENTS

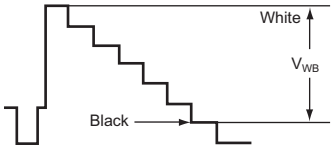
4-1. BLUE OFFSET ADJUSTMENT

1. Receive the all black (1080i, component) signal with VIDEO 5 input, and set PICTURE to maximum.
2. Connect an oscilloscope between CN5 ⑦ pin (B) on the (A board) and ground.
3. Set in the service mode and select the category “2150D-2”.
4. Adjust “SLIN” so that the waveform level is 2.20 ± 0.05Vpp.
5. After completing the adjustments, write the data into memory by pressing “MUTING” → “ENTER” on the remote commander.
6. Receive the RF signal and change the wide screen mode to “Wide Zoom”. Copy the same data to “SLIN”.



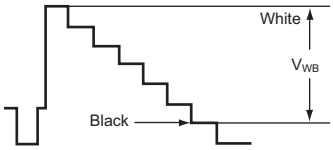
4-2. P &P SUB CONTRAST ADJUSTMENT (VIDEO) (SCON)

1. Receive the signal.
   TV terminal (sub) : Color-bar (white-75%, 7.5% setup)
   VIDEO terminal (main) : Color-bar (white-75%, 7.5% setup)
2. VIDEO MODE : Pro
   PICTURE : Maximum
   COLOR : Minimum
   2150P-2 1 RGBS : 2
3. Set to P & P mode, and set to service mode.
4. Connect an oscilloscope between the check point and ground.
   Check points : CN5 pin ⑥
   A Board : CN5 pin ⑥
5. Select “2103-1-02” (Main scon), and adjust so that the waveform level of V_{WB} is 1.55 ± 0.04Vp-p.
6. Select “2103-2-02” (Sub scon), and adjust so that the waveform level of V_{WB} is 1.55 ± 0.04Vp-p.
7. After completing the adjustments, write the data into memory by pressing “MUTING” → “ENTER” on the remote commander.



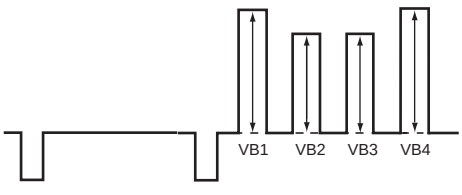
4-3. P & P SUB CONTRAST ADJUSTMENT (RF) (SCON)

1. Receive the signal.
   TV terminal (sub) : Color-bar (white-75%, 7.5% setup)
   VIDEO terminal (main) : Color-bar (white-75%, 7.5% setup)
2. VIDEO MODE : Pro
   PICTURE : Maximum
   COLOR : Minimum
   2150P-2 1 RGBS : 2
3. Set to P & P mode, and set to service mode.
4. Connect an oscilloscope between the check point and ground.
   Check points : CN5 ⑥
   A Board : CN5 ⑥
5. Select “2103-1-02” (Main scon), and adjust so that the waveform level of V_{WB} is 1.55 ± 0.04Vp-p.
6. Select “2103-2-02” (Sub scon), and adjust so that the waveform level of V_{WB} is 1.55 ± 0.04Vp-p.
7. After completing the adjustments, write the data into memory by pressing “MUTING” → “ENTER” on the remote commander.



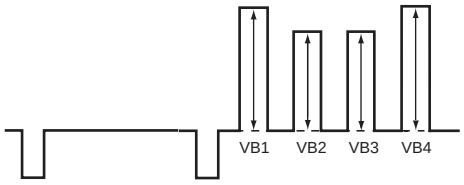
4-4. P & P SUB-HUE AND SUB-COLOR ADJUSTMENT (VIDEO) (SHUE, SCOL)

1. Receive the signal.
   TV terminal (sub) : Color-bar (white-75%, 7.5% setup)
   VIDEO terminal (main) : Color-bar (white-75%, 7.5% setup)
2. VIDEO MODE : Pro
   PICTURE : Maximum
   COLOR : Center
   2150P-2 1 RGBS : 7
3. Set to P & P mode, and set to service mode.
4. Connect an oscilloscope between pin ⑦ of CN5 (A board) connector and ground.
5. Select “2103-1-03 SCOL, -04 SHUE” (Main), and adjust them to have VB1 ≤ VB4 and VB2 ≤ VB3 in the waveform levels.
6. Select “2103-2-03 SCOL, -04 SHUE” (Sub), and adjust them to have VB1 ≤ VB4 and VB2 ≤ VB3 in the waveform levels.
7. After completing the adjustments, write the data into memory by pressing “MUTING” → “ENTER” on the remote commander.



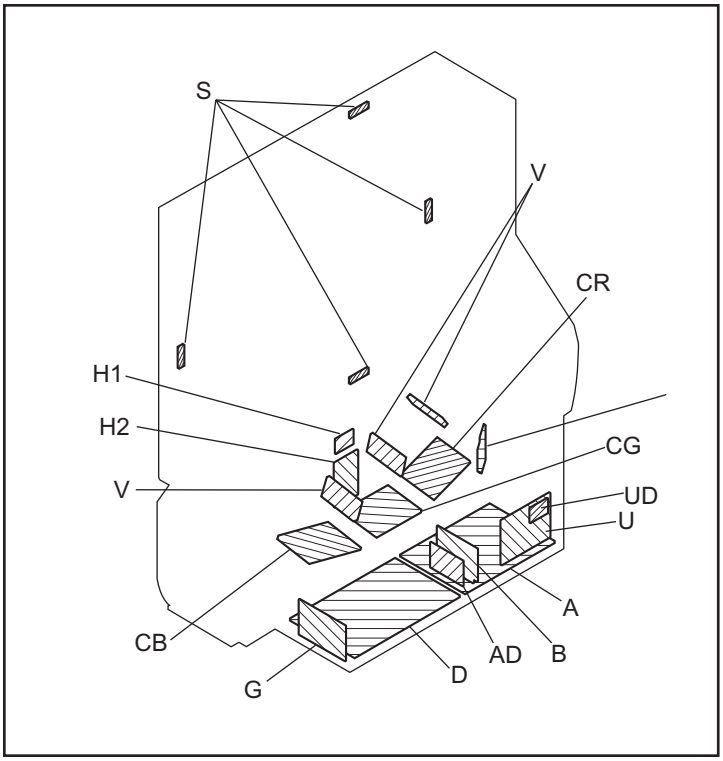
4-5. P & P SUB-HUE AND SUB-COLOR ADJUSTMENT (RF) (SHUE, SCOL)

1. Receive the signal.
   TV terminal (main) : Color-bar (white-75%, 7.5% setup)
   VIDEO terminal (sub) : Color-bar (white-75%, 7.5% setup)
2. VIDEO MODE : Pro
   PICTURE : Maximum
   COLOR : Center
   2150P-2 1 RGBS : 7
3. Set to P & P mode, and set to service mode.
4. Connect an oscilloscope between pin ⑦ of CN5 (A board) connector and ground.
5. Select “2103-1-03 SCOL, -04 SHUE” (Main), and adjust them to have VB1 ≤ VB4 and VB2 ≤ VB3 in the waveform levels.
6. Select “2103-2-03 SCOL, -04 SHUE” (Sub), and adjust them to have VB1 ≤ VB4 and VB2 ≤ VB3 in the waveform levels.
7. After completing the adjustments, write the data into memory by pressing “MUTING” → “ENTER” on the remote commander.



SECTION 5: DIAGRAMS

5-1. CIRCUIT BOARDS LOCATION



5-2. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS INFORMATION

All capacitors are in µF unless otherwise noted. pF : µµF 50WV or less are not indicated except for electrolytics and tantalums.

All electrolytics are in 50V unless otherwise specified.

All resistors are in ohms. K=1000, M=1000k

Indication of resistance, which does not have one for rating electrical power, is as follows: Pitch : 5mm

Rating electrical power : $^1/_4$ W

$^1/_4$ W in resistance, $^1/_{10}$ W and $^1/_8$ W in chip resistance.

: nonflammable resistor.

: fusible resistor.

△ : internal component.

: panel designation and adjustment for repair.

⊥ : earth ground

⏚ : earth-chassis

All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

Readings are taken with a NTSC color-bar signal input.

Readings are taken with a 10M digital multimeter.

Voltages are DC with respect to ground unless otherwise noted.

Voltage variations may be noted due to normal production tolerances.

All voltages are in V.

S : Measurement impossibillity.

: B+ line

: B-line. (Actual measured value may be different).

: signal path. (RF)

Circled numbers are waveform references.

The components identified by ⋈ in this basic schematic diagram have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be necessary, replace only with the value originally used.

When replacing components identified by ◪, make the necessary adjustments as indicated. If the results do not meet the specified value, change the component identified by ⋈ and repeat the adjustment until the specified value is achieved.

(Refer to adjustments in Sections 3-1 and 3-2.)

When replacing the parts listed in the table below, it is important to perform the related adjustments.

Part Replaced (◪)	Adjustment (⋈)
A BOARD: C8079, C8083, C8090, C8129, D8013, D8015, D8038, D8043, IC8006, Q8021, R8055, R8099, R8102, R8128, R8129, R8131, R8139, R8140, R8142, R8153, R8163, R8223, R8230, T8004 (LOT), T8005 (FBT), HV Block, D Board	**HV REGULATOR** VR8001
A BOARD: C8054, C8086, C8088, C8100, C8104, C8188, C8123, C8124, D8019, D8020, D8022, D8028, D8036, FB8001, IC8008, Q8035, Q8038, R8035, R8043, R8159, R8166, R8171, R8196, R8201, T8004 (LOT), T8005 (FBT), HV Block, D Board	**HV HOLD DOWN** VR8002

REFERENCE INFORMATION

RESISTOR	**: RN**	**METAL FILM**
	: RC	**SOLID**
	: FPRD	**NONFLAMMABLE CARBON**
	: FUSE	**NONFLAMMABLE FUSIBLE**
	: RW	**NONFLAMMABLE WIREWOUND**
	: RS	**NONFLAMMABLE METAL OXIDE**
	: RB	**NONFLAMMABLE CEMENT**
	: ※	**ADJUSTMENT RESISTOR**
COIL	**: LF-8L**	**MICRO INDUCTOR**
CAPACITOR	**: TA**	**TANTALUM**
	: PS	**STYROL**
	: PP	**POLYPROPYLENE**
	: PT	**MYLAR**
	: MPS	**METALIZED POLYESTER**
	: MPP	**METALIZED POLYPROPYLENE**
	: ALB	**BIPOLAR**
	: ALT	**HIGH TEMPERATURE**
	: ALR	**HIGH RIPPLE**

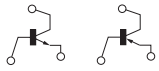
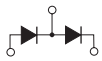
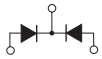
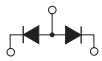
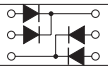
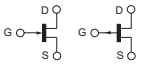
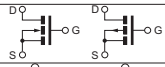
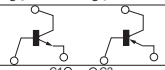
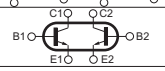
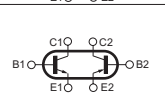
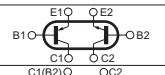
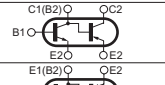
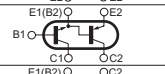
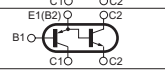
The components identified by shading and ⚠ symbol are critical for safety. Replace only with part number specified.

The symbol ▮▭ indicates a fast operating fuse and is displayed on the component side of the board. Replace only with fuse of the same rating as marked.

Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

Le symbole ▮▭ indique une fusible a action rapide. Doit etre remplace par une fusible de meme yaleur, comme maque.

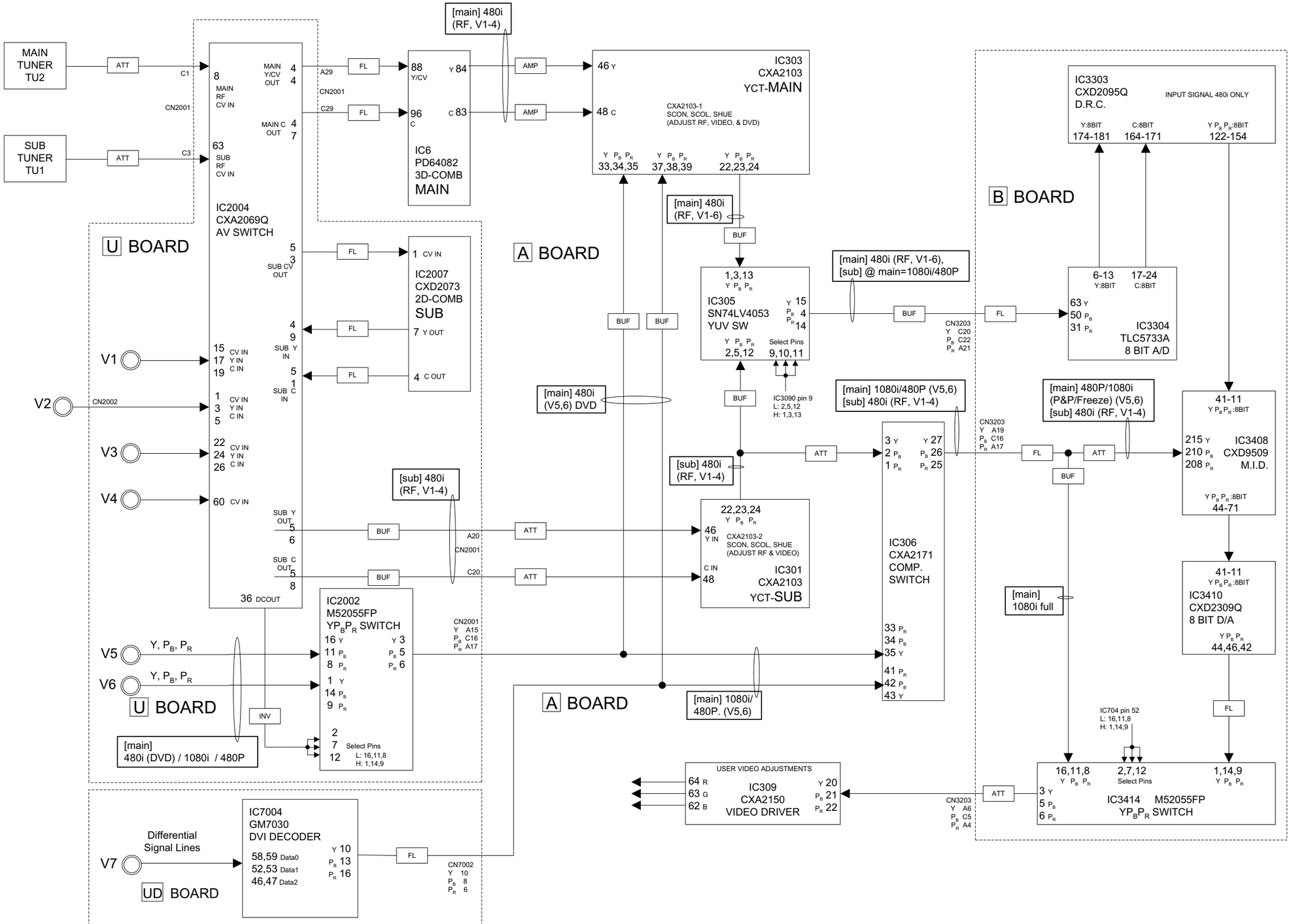
Terminal name of semiconductors in silk screen printed circuit (*)

	Device	Printed symbol	Terminal name	Circuit
①	Transistor		Collector Base Emitter	
②	Transistor		Collector Base Emitter	
③	Diode		Cathode Anode	
④	Diode		Cathode Anode (NC)	
⑤	Diode		Cathode Anode (NC)	
⑥	Diode		Common Anode Cathode	
⑦	Diode		Common Anode Cathode	
⑧	Diode		Common Anode Anode	
⑨	Diode		Common Anode Anode	
⑩	Diode		Common Cathode Cathode	
⑪	Diode		Common Cathode Cathode	
⑫	Diode		Anode Cathode Anode Anode Cathode Anode	
⑬	Transistor (FET)		Drain Source Gate	
⑭	Transistor (FET)		Drain Source Gate	
⑮	Transistor (FET)		Source Drain Gate	
⑯	Transistor		Emitter Collector Base	
⑰	Transistor		C2 B1 E1 E2 B2 C1	
⑱	Transistor		C1 B2 E2 E1 B1 C2	
⑲	Transistor		C1 B2 E2 E1 B1 C2	
⑳	Transistor		C1 B2 E2 E1 B1 C2	
㉑	Transistor		E2 B1 E1 C2 C1(B2)	
㉒	Transistor		(B2) B1 E1 E2 C1 C2	
㉓	Transistor		(B2) E2 E1 B1 C2 C1	
-	Discrete semiconductor			

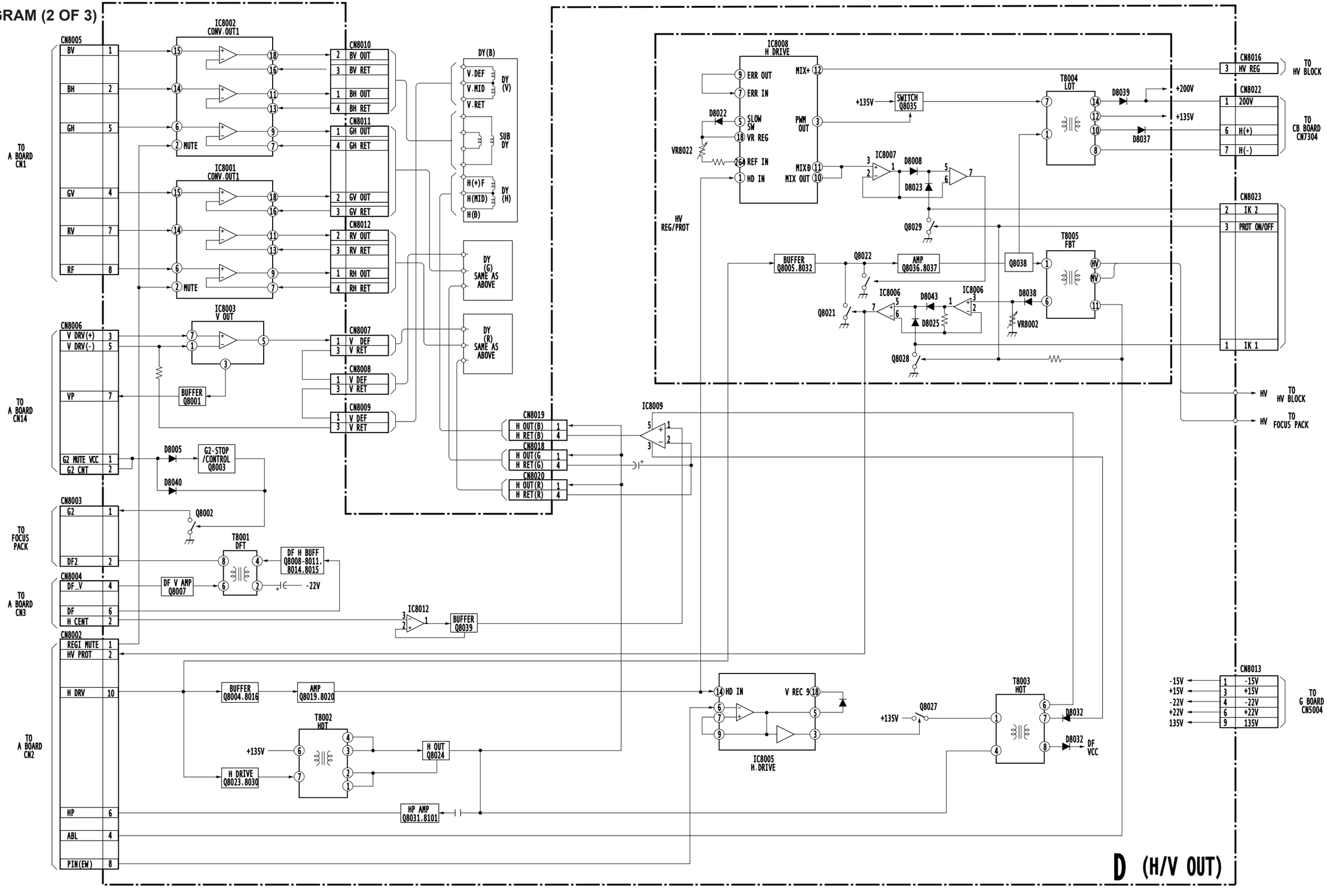
(Chip semiconductors that are not actually used are included.)

Ver.1.6

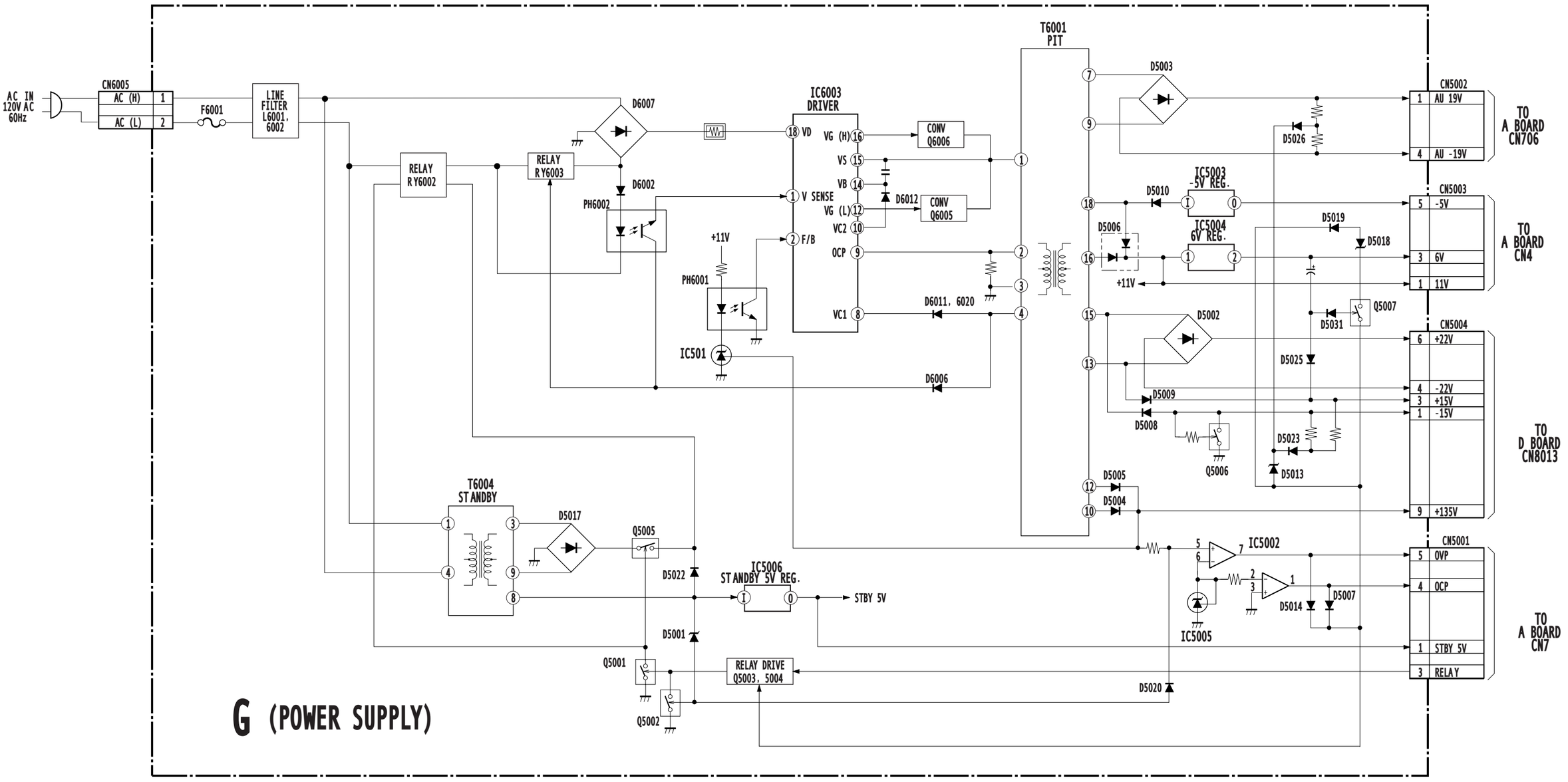
5-3. BLOCK DIAGRAMS
BLOCK DIAGRAM (1 OF 3)



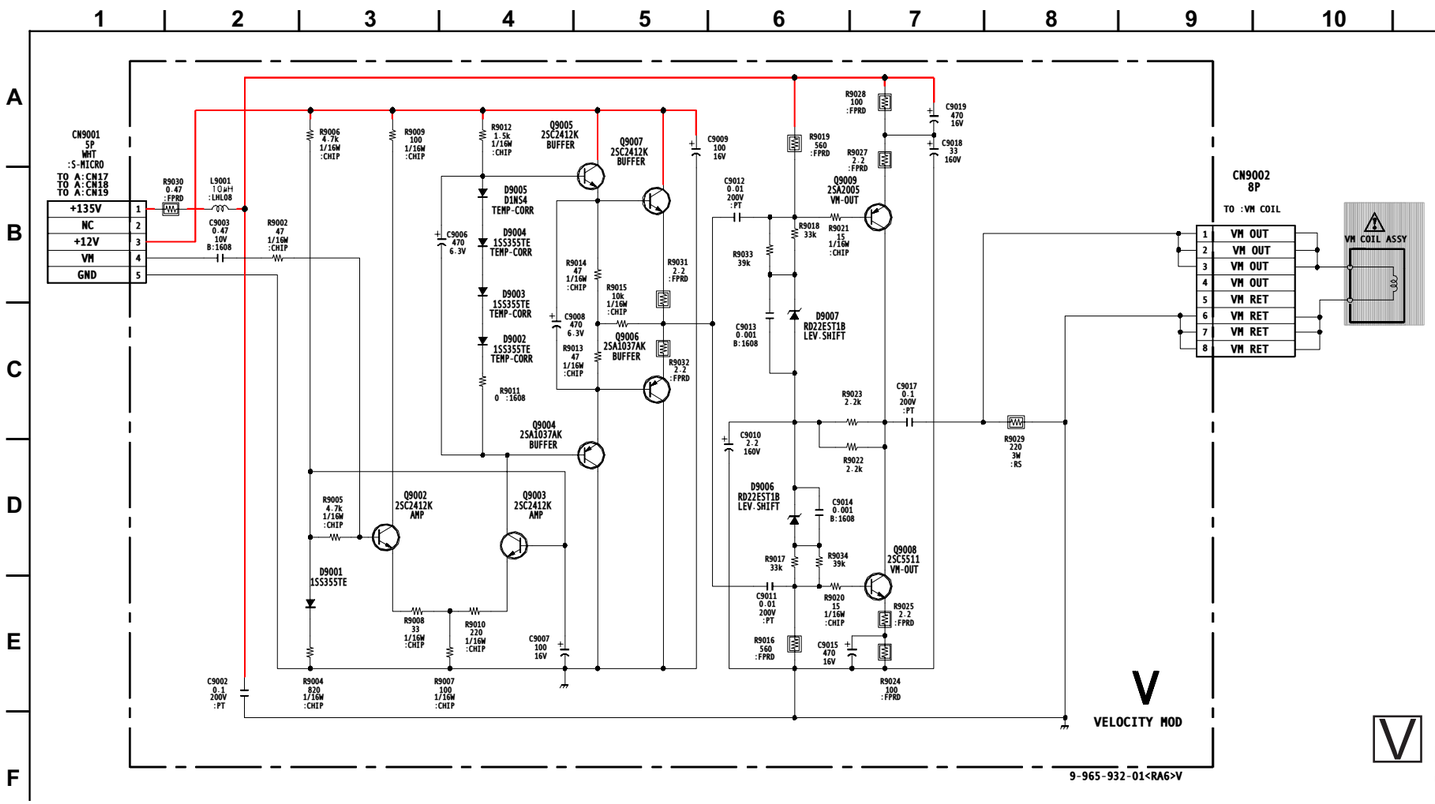
BLOCK DIAGRAM (2 OF 3)



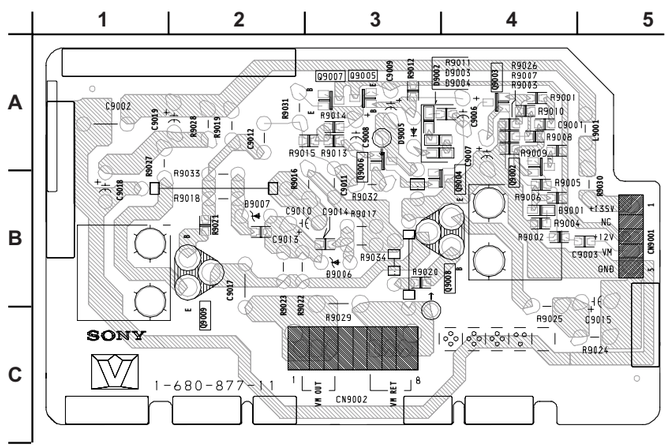
BLOCK DIAGRAM (3 OF 3)



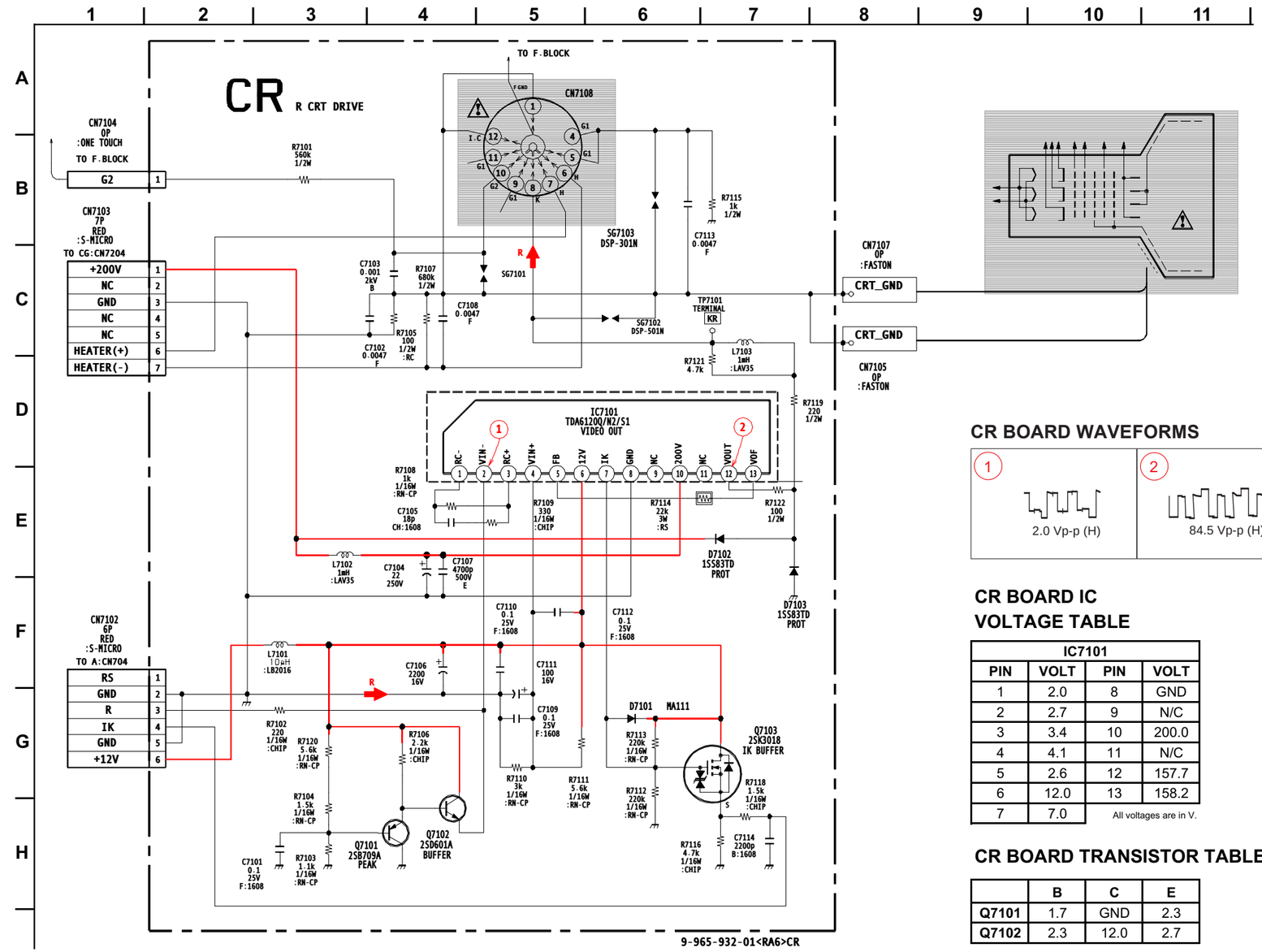
5-4. SCHEMATICS AND SUPPORTING INFORMATION
V BOARD SCHEMATIC DIAGRAM



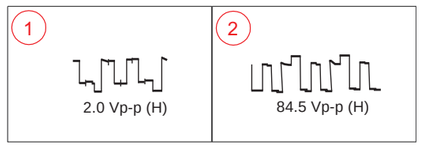
[V] [VELOCITY MOD]
COMPONENT SIDE



CR BOARD SCHEMATIC DIAGRAM



CR BOARD WAVEFORMS



CR BOARD IC VOLTAGE TABLE

IC7101			
PIN	VOLT	PIN	VOLT
1	2.0	8	GND
2	2.7	9	N/C
3	3.4	10	200.0
4	4.1	11	N/C
5	2.6	12	157.7
6	12.0	13	158.2
7	7.0		

All voltages are in V.

CR BOARD TRANSISTOR TABLE

	B	C	E
Q7101	1.7	GND	2.3
Q7102	2.3	12.0	2.7

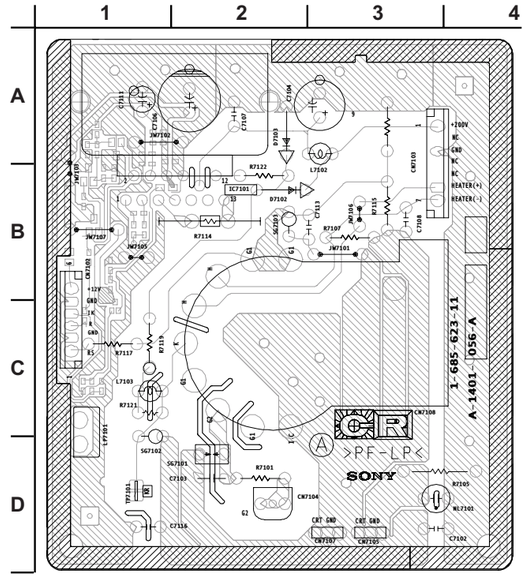
	G	D	S
Q7103	7.0	12.0	5.7

All voltages are in V.

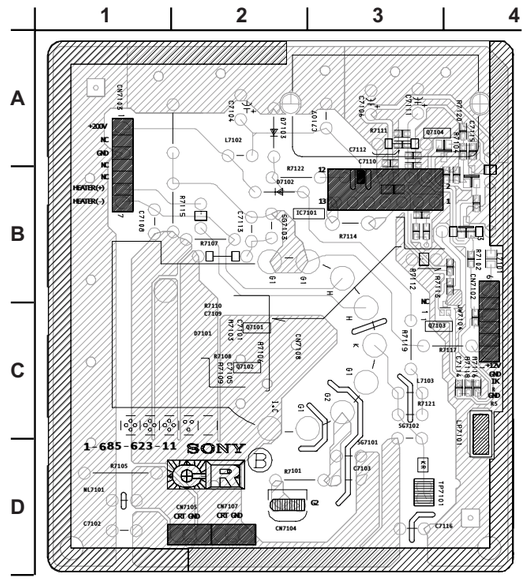
CR

[R CRT DRIVE]

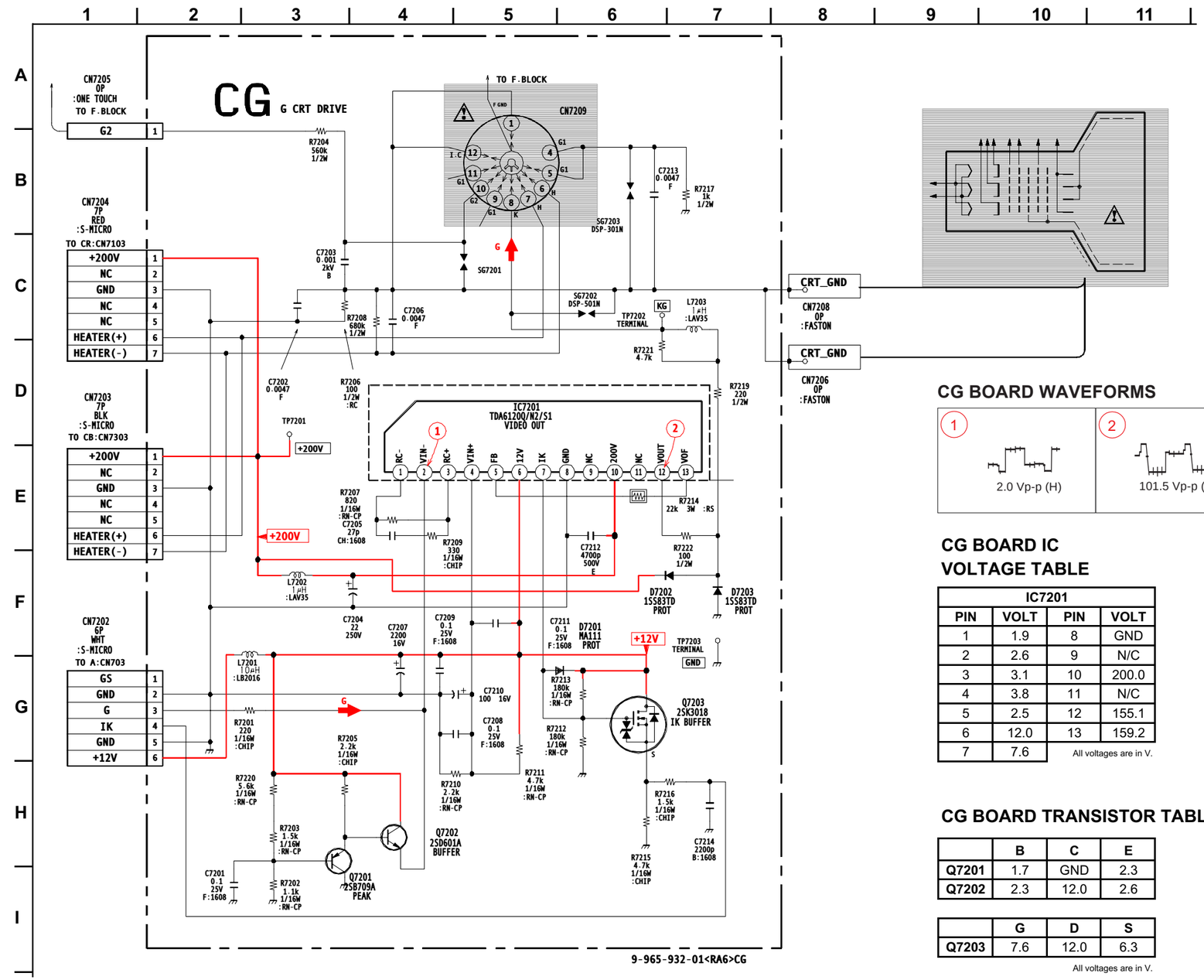
COMPONENT SIDE



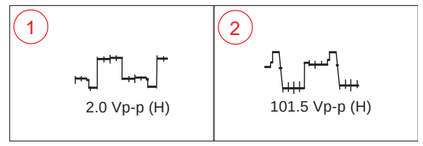
CONDUCTOR SIDE



CG BOARD SCHEMATIC DIAGRAM



CG BOARD WAVEFORMS



CG BOARD IC VOLTAGE TABLE

IC7201			
PIN	VOLT	PIN	VOLT
1	1.9	8	GND
2	2.6	9	N/C
3	3.1	10	200.0
4	3.8	11	N/C
5	2.5	12	155.1
6	12.0	13	159.2
7	7.6		

All voltages are in V.

CG BOARD TRANSISTOR TABLE

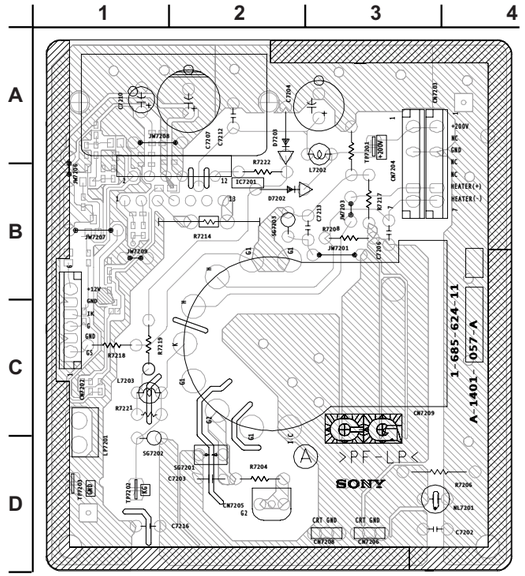
	B	C	E
Q7201	1.7	GND	2.3
Q7202	2.3	12.0	2.6

	G	D	S
Q7203	7.6	12.0	6.3

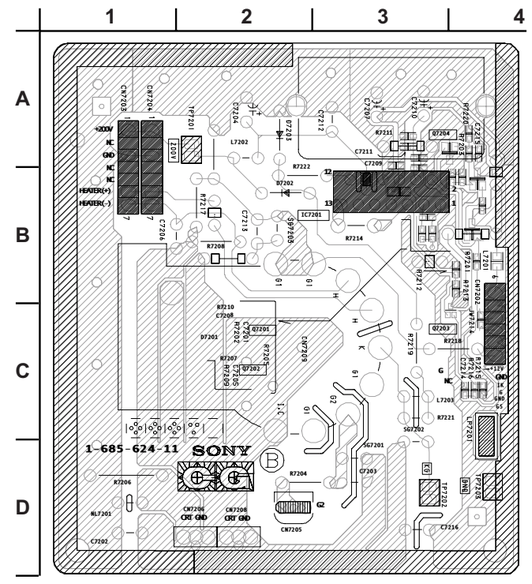
All voltages are in V.

CG [G CRT DRIVE]

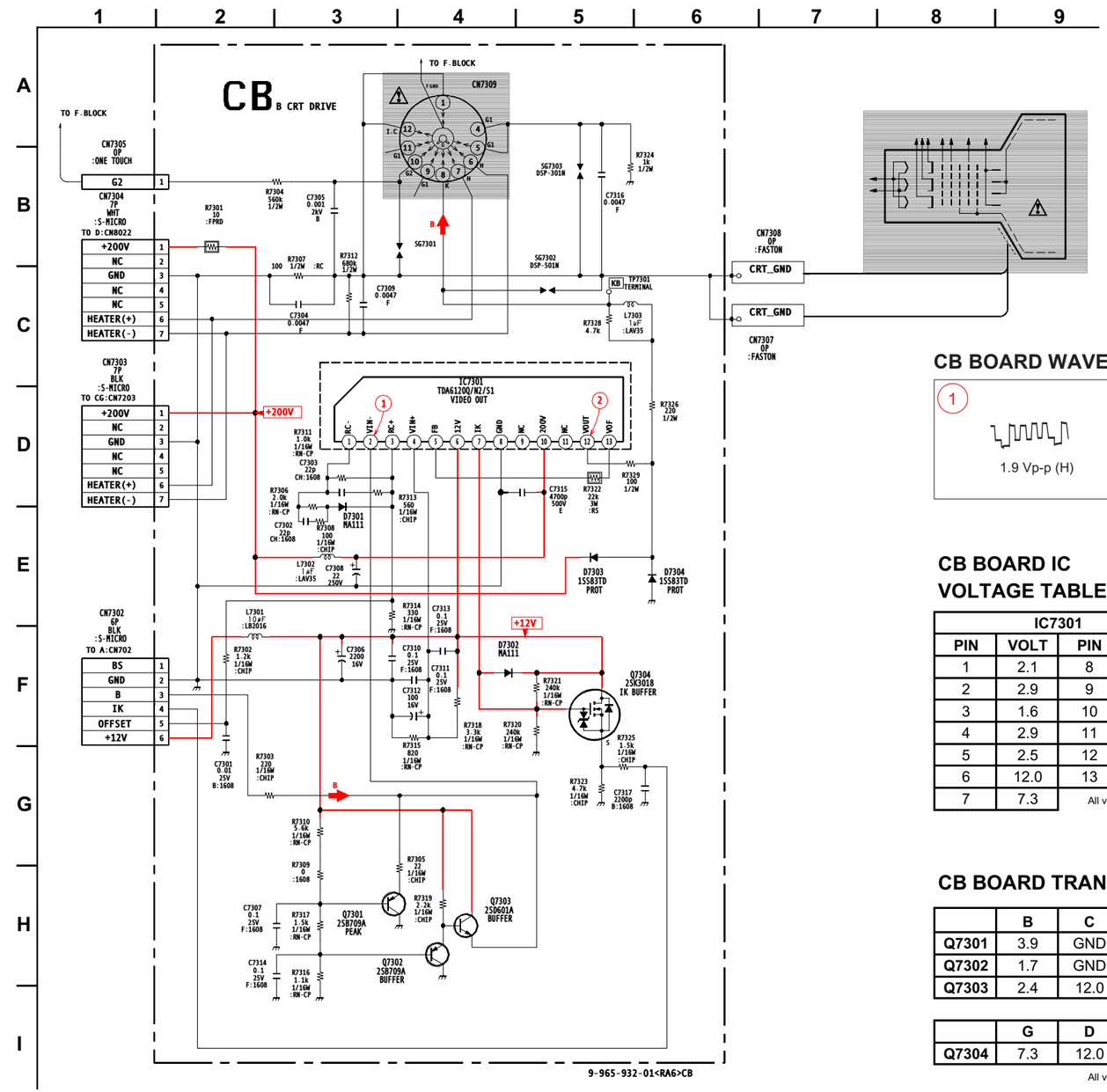
COMPONENT SIDE



CONDUCTOR SIDE



CB BOARD SCHEMATIC DIAGRAM



CB BOARD WAVEFORMS

1 1.9 Vp-p (H)	2 94.0 Vp-p (H)

CB BOARD IC VOLTAGE TABLE

IC7301			
PIN	VOLT	PIN	VOLT
1	2.1	8	GND
2	2.9	9	N/C
3	1.6	10	200.0
4	2.9	11	N/C
5	2.5	12	161.8
6	12.0	13	144.5
7	7.3		

All voltages are in V.

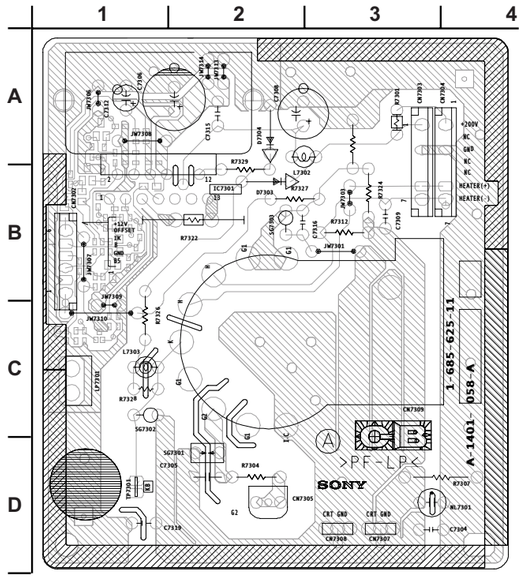
CB BOARD TRANSISTOR TABLE

	B	C	E
Q7301	3.9	GND	3.0
Q7302	1.7	GND	2.4
Q7303	2.4	12.0	2.9

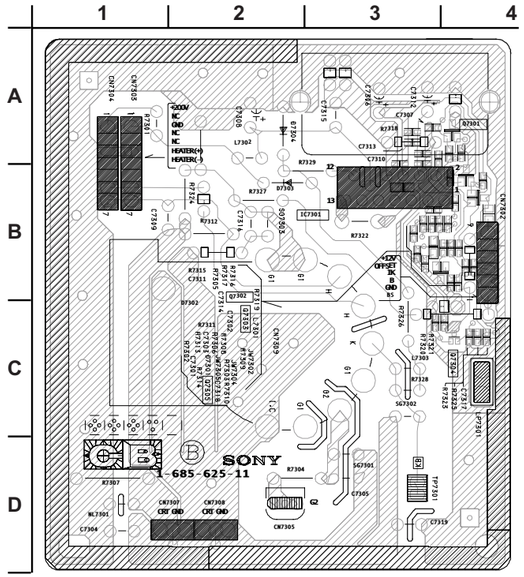
	G	D	S
Q7304	7.3	12.0	6.0

All voltages are in V.

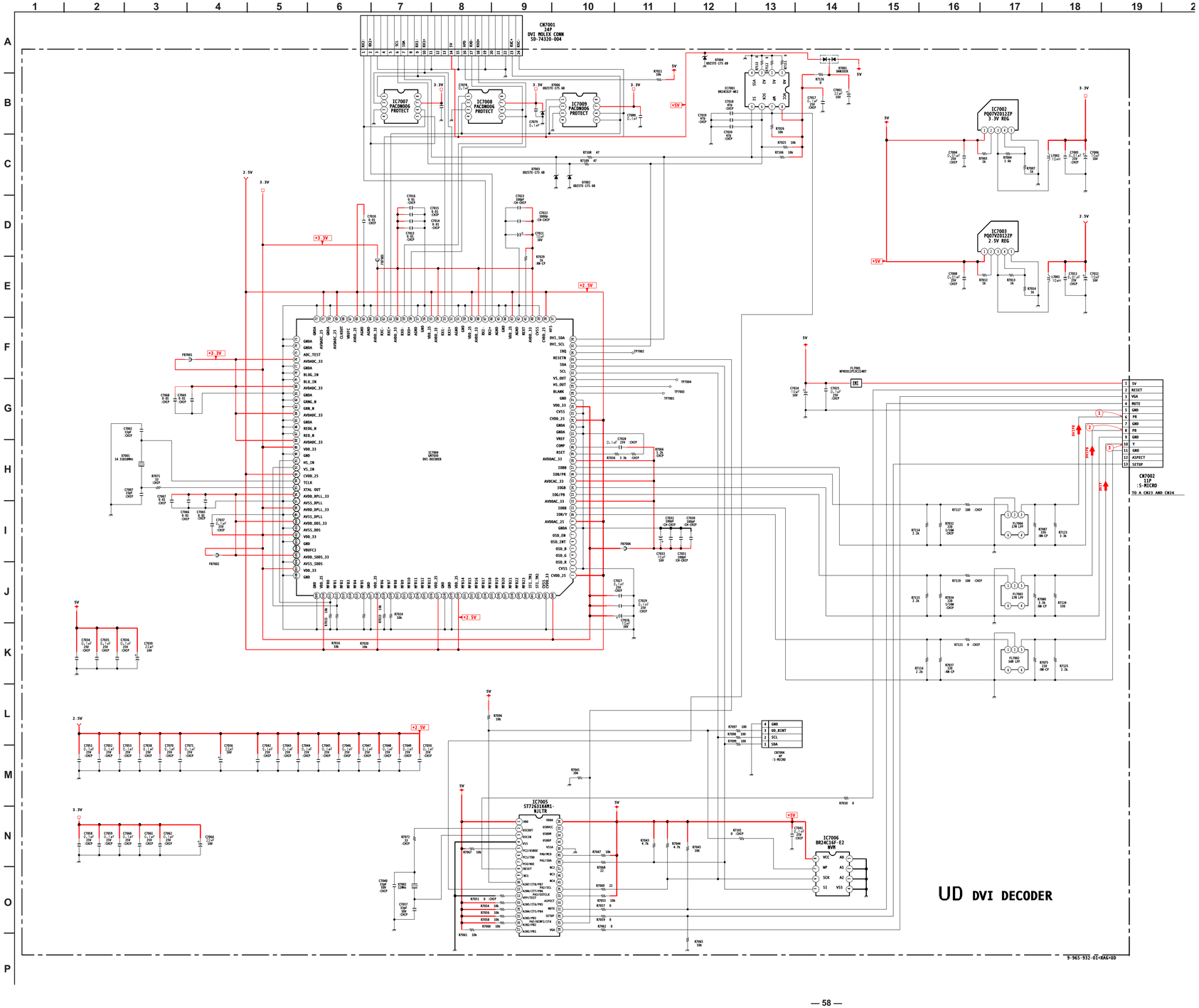
CB [B CRT DRIVE] COMPONENT SIDE



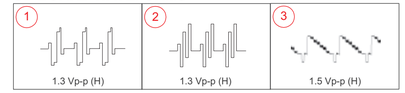
CONDUCTOR SIDE



UD BOARD SCHEMATIC DIAGRAM The UD board is not field repairable. If service is required, use the following part number to order a complete replacement board.
A-1300-324-A UD Board, Complete

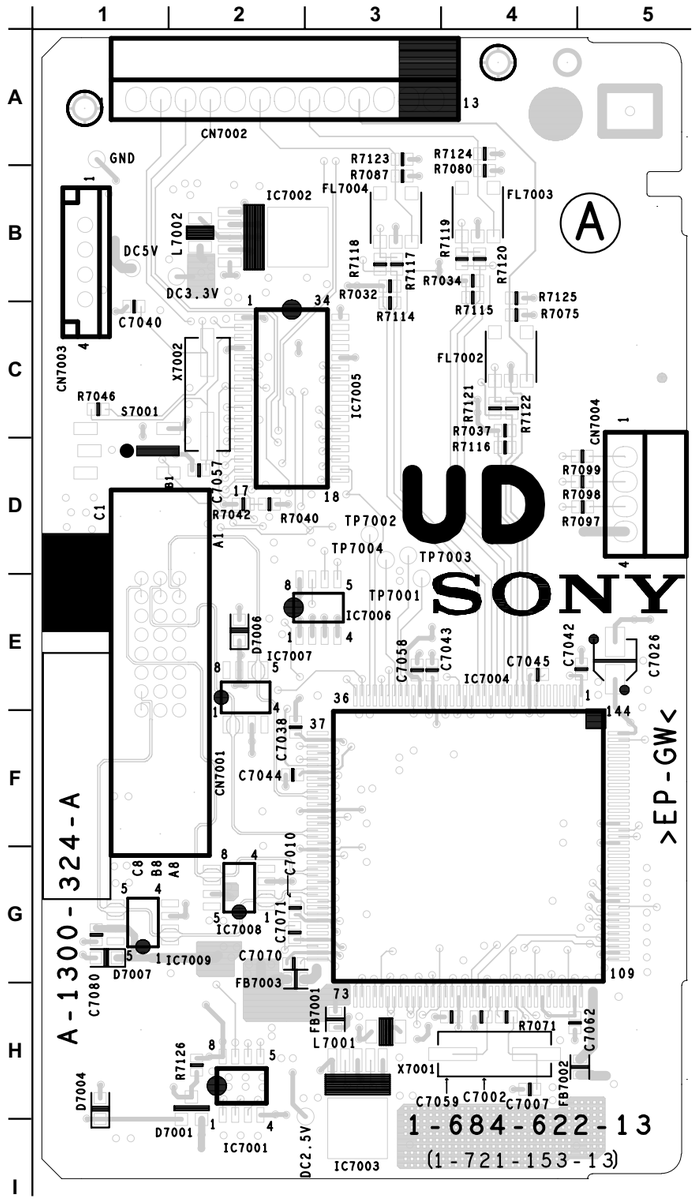


UD BOARD WAVEFORMS

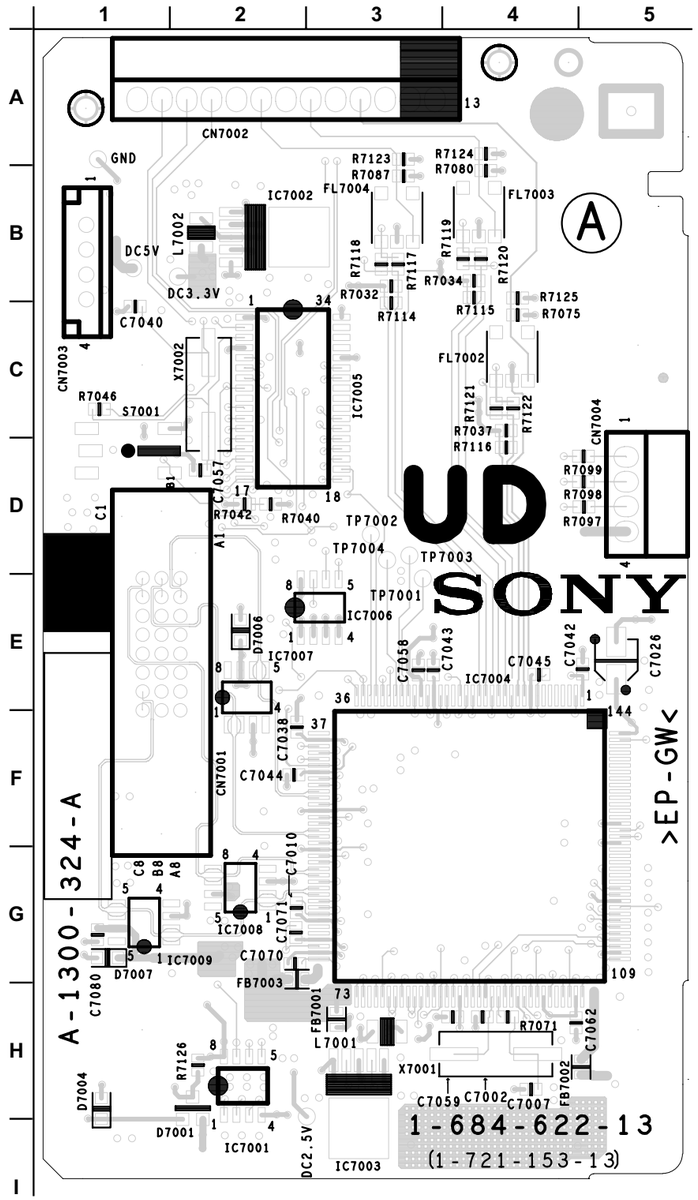


UD [DVI DECODER]

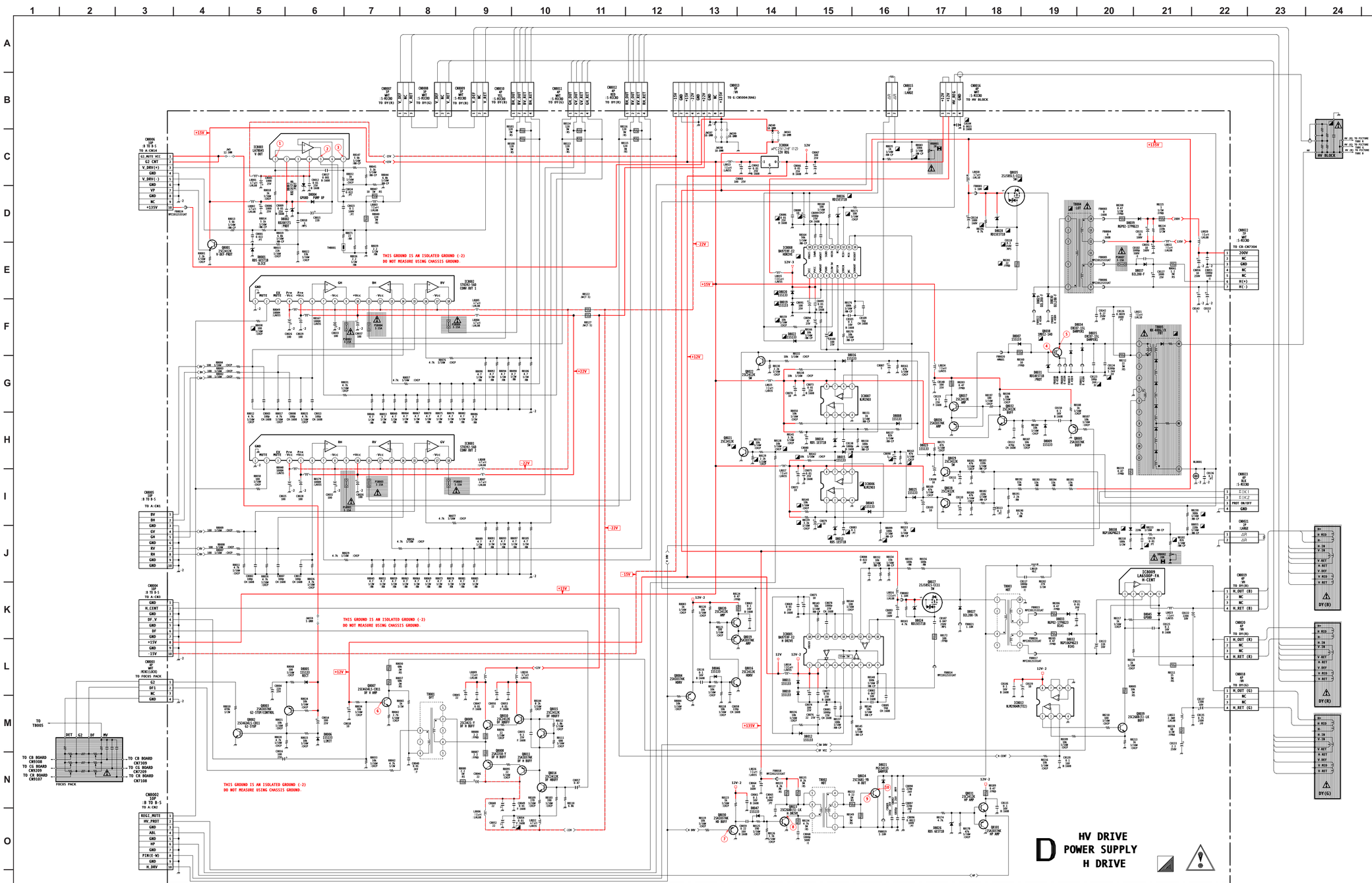
[COMPONENT SIDE]



[CONDUCTOR SIDE]



D BOARD SCHEMATIC DIAGRAM



D BOARD WAVEFORMS

1 500 mVp-p (V)	2 53.2 Vp-p (V)
3 500 mVp-p (V)	4 14.7 Vp-p (H)
5 940 Vp-p (H)	6 6.5 Vp-p (V)
7 3.5 Vp-p (H)	8 104 Vp-p (H)
9 7.6 Vp-p (H)	10 1030 Vp-p (H)

D BOARD IC VOLTAGE LIST

IC8001		14	0.3	15	GND	10	7.4
PIN	VOLT	15	0	16	3.2	11	7.4
1	GND	16	0	17	2.6	12	7.4
2	4.3	17	-22	18	9.1	13	GND
3	N/C	18	0.1	IC8006		14	7.1
4	-22.0	IC8003		PIN	VOLT	15	GND
5	22.0	PIN	VOLT	1	0.1	16	3.2
6	-0.3	1	1.3	2	5.0	17	2.6
7	-0.3	2	15.0	3	4.5	18	9.1
8	-22.0	3	-13.1	4	GND	IC8009	
9	-0.5	4	-15.0	5	0.0	PIN	VOLT
10	22.0	5	0.4	6	5.0	1	98.2
11	0.1	6	15.0	7	0.1	2	98.2
12	-22.0	7	1.3	8	15.0	3	94.0
13	0.0	IC8004		IC8007		4	97.8
14	0.0	PIN	VOLT	PIN	VOLT	5	101.1
15	0.0	I	15.0	1	0.1	IC8010	
16	0.0	O	12.0	2	5.0	PIN	VOLT
17	-22.0	G	GND	3	4.0	I	7.0
18	0.1	IC8005		4	GND	O	5.0
IC8002		PIN	VOLT	5	0.0	G	GND
PIN	VOLT	1	12.0	6	5.0	IC8012	
1	GND	2	12.0	7	0.1	PIN	VOLT
2	4.3	3	5.8	8	15.0	1	2.7
3	N/C	4	GND	IC8008		2	2.1
4	-22.0	5	3.8	PIN	VOLT	3	2.1
5	22.0	6	3.8	1	12.0	4	GND
6	-0.1	7	3.8	2	12.0	5	GND
7	-0.1	8	N/C	3	6.0	6	0.0
8	-22.0	9	3.8	4	GND	7	0.0
9	0.0	10	3.6	5	8.0	8	12.0
10	22.0	11	3.6	6	7.4		
11	0.5	12	3.6	7	7.4		
12	-22.0	13	GND	8	N/C		
13	0.3	14	7.1	9	3.3		

All voltages are in V.

D BOARD TRANSISTOR VOLTAGE LIST

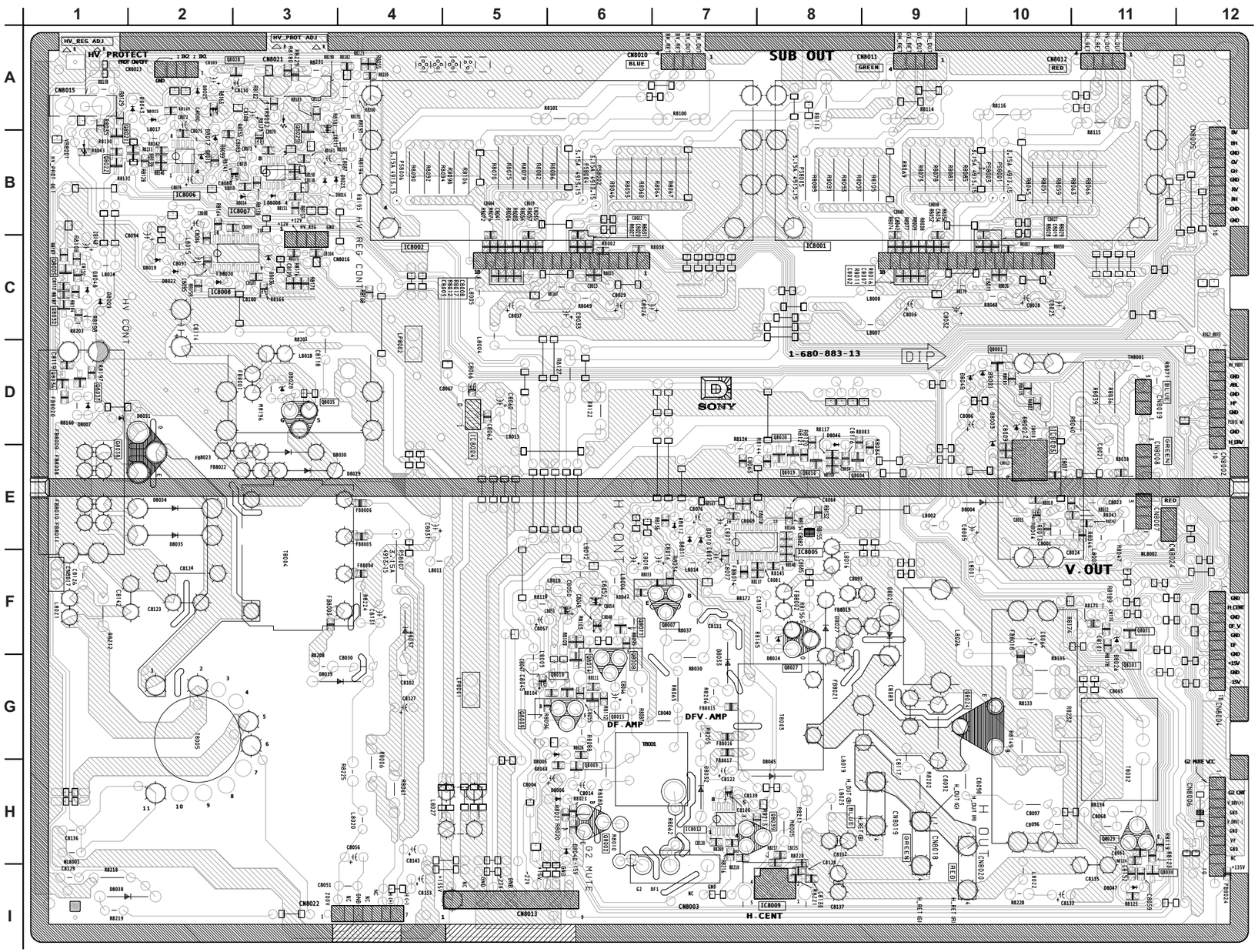
	B	C	E		B	C	E
Q8001	-0.4	15.0	0.1	**Q8022**	0.0	8.9	GND
Q8002	0	13.0	GND	**Q8023**	-0.5	68.0	GND
Q8003	14.6	0.0	14.6	**Q8024**	0.1	242.0	GND
Q8004	3.4	GND	4.0	**Q8028**	0.5	0.0	GND
Q8005	3.4	GND	4.1	**Q8029**	0.5	0.0	GND
Q8007	5.8	204.0	5.2	**Q8030**	3.4	GND	4.0
Q8008	2.8	-22.0	3.3	**Q8031**	0.2	12.0	0.6
Q8009	4.0	22.0	3.4	**Q8032**	3.4	4.1	GND
Q8010	4.5	22.0	4.0	**Q8036**	8.9	GND	8.7
Q8011	2.3	-22.0	2.7	**Q8037**	8.9	14.6	8.7
Q8014	-20.0	2.3	-20.6	**Q8039**	2.7	76.7	2.1
Q8015	2.9	4.5	2.3	**Q8041**	3.4	GND	8.9
Q8016	-0.3	7.4	GND	**Q8042**	9.6	29.8	GND
Q8019	7.4	GND	7.2	**Q8043**	8.9	192.0	0.1
Q8020	7.4	12.0	7.2	**Q8044**	0.6	0.0	GND
Q8021	0.0	8.9	GND	**Q8101**	0.2	GND	0.6
				Q8038	8.9	192.0	0.6

All voltages are in V.

	D	G	S
Q8027	115.6	130.9	135.9
Q8035	115.6	130.9	135.9

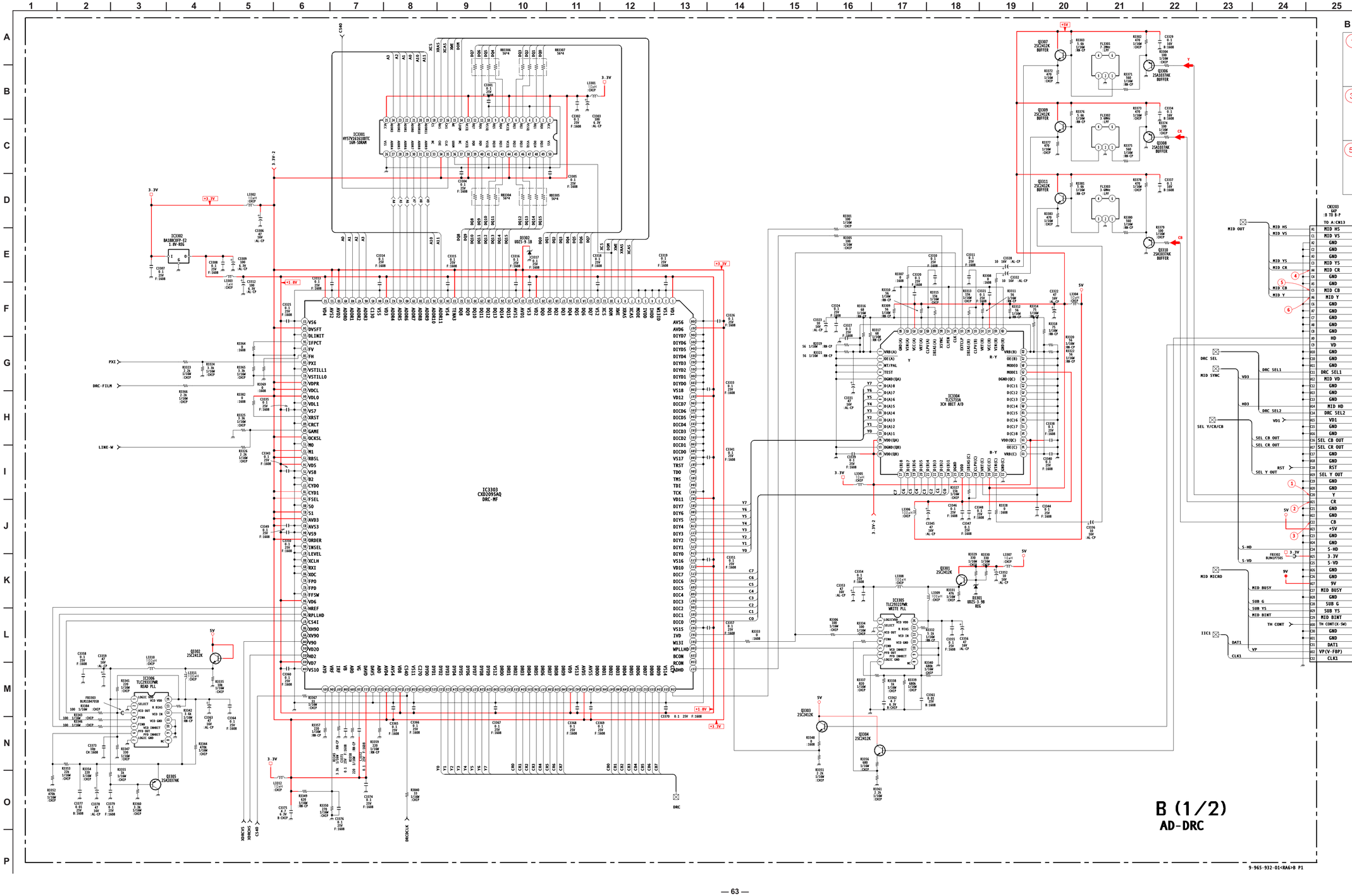
All voltages are in V.

D [HV DRIVE, POWER SUPPLY, H DRIVE] [COMPONENT SIDE]

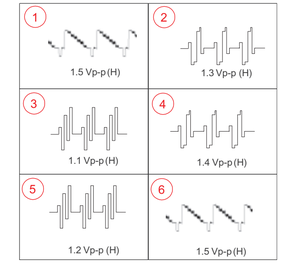


B BOARD SCHEMATIC DIAGRAM (1 OF 2)

The B board is not field repairable. If service is required, use the following part number to order a complete replacement board.
A-1136-271-A B Board, Complete



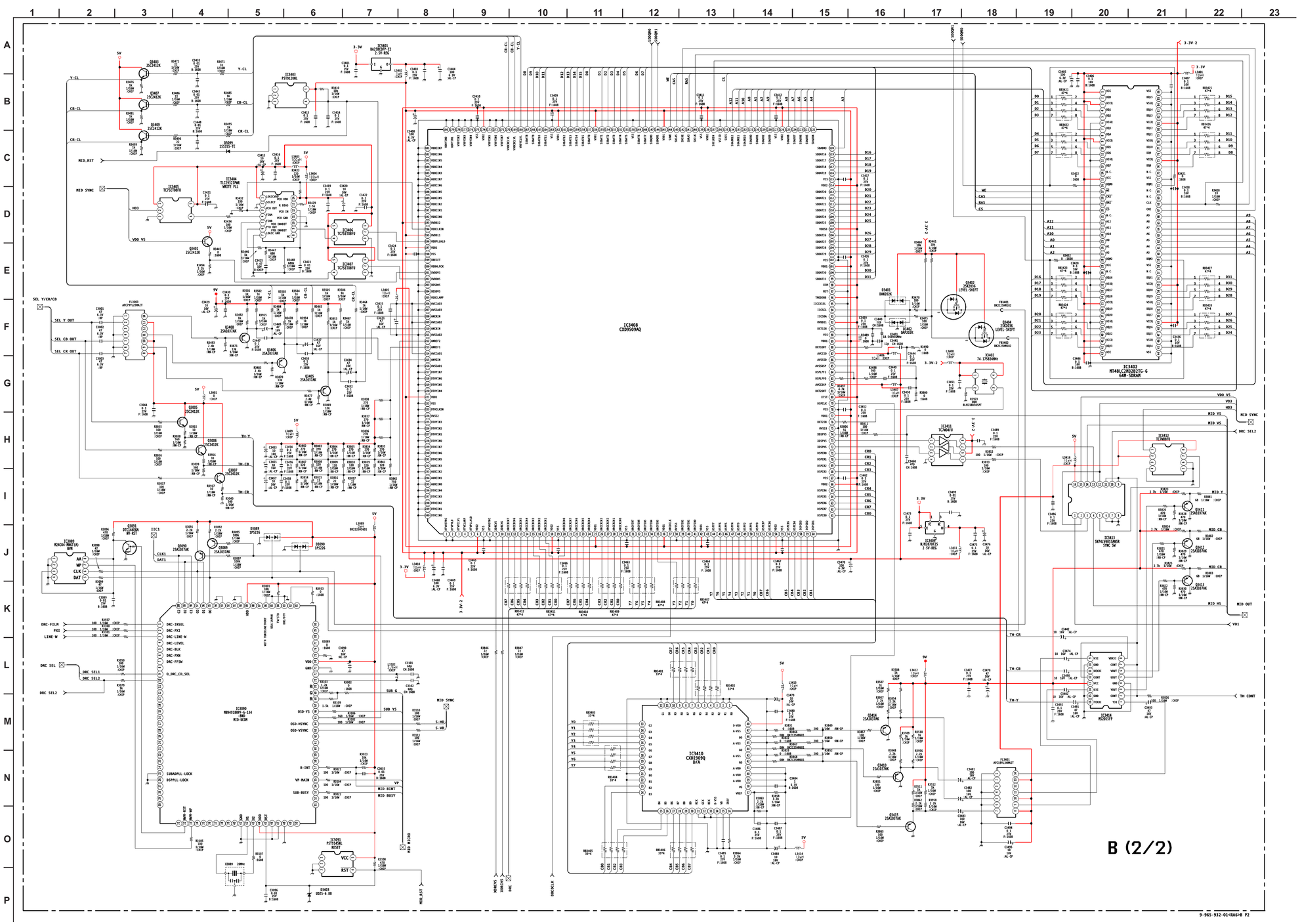
B BOARD WAVEFORMS



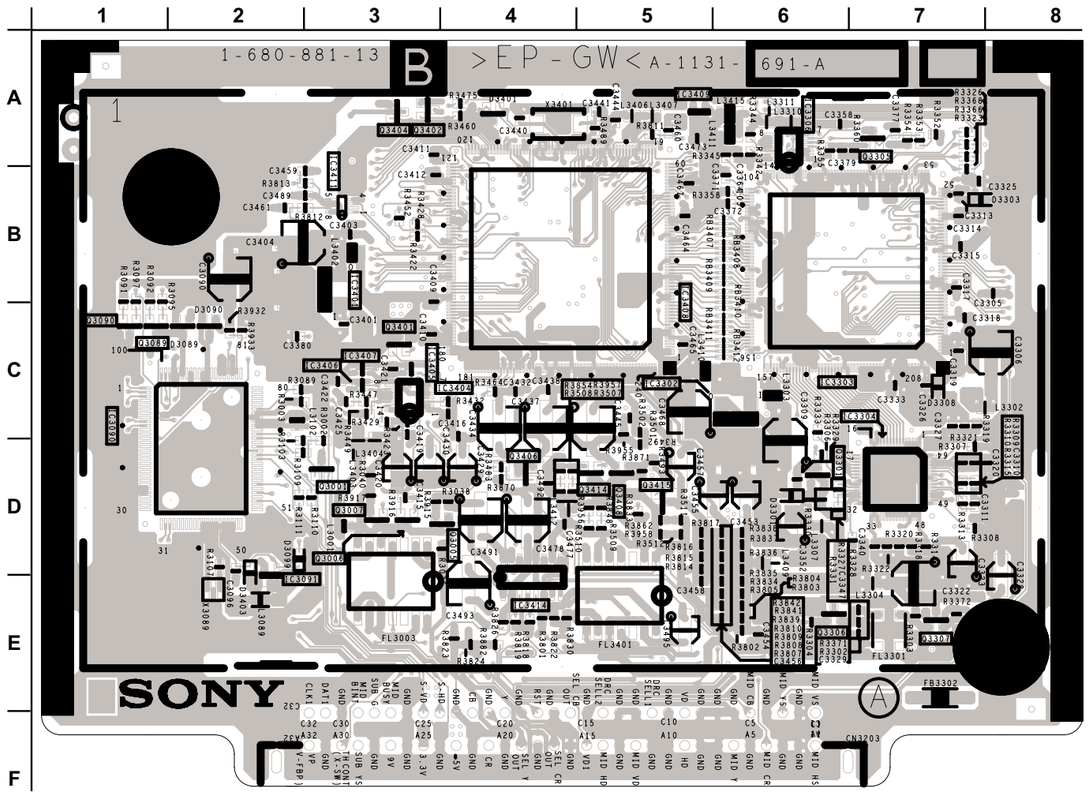
B (1/2)
AD-DRC

9-965-932-01<RA6>B P1

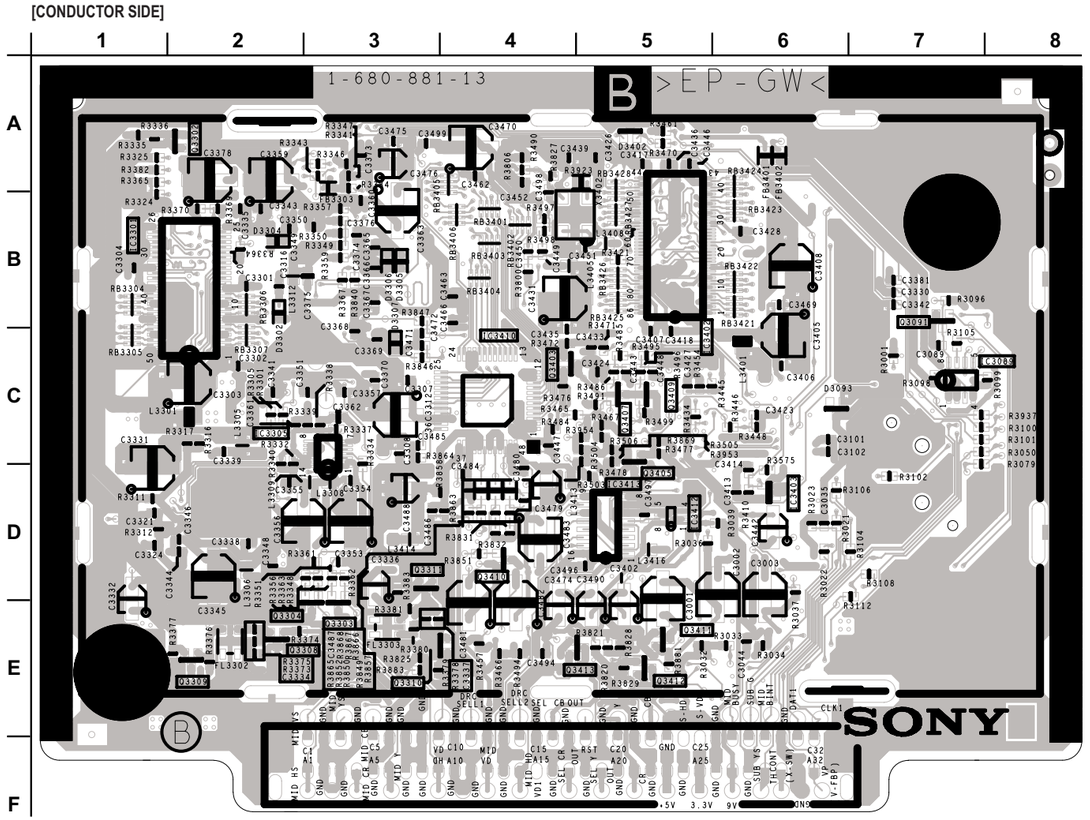
B BOARD SCHEMATIC DIAGRAM (2 OF 2)



B [AD-DRC] [COMPONENT SIDE]

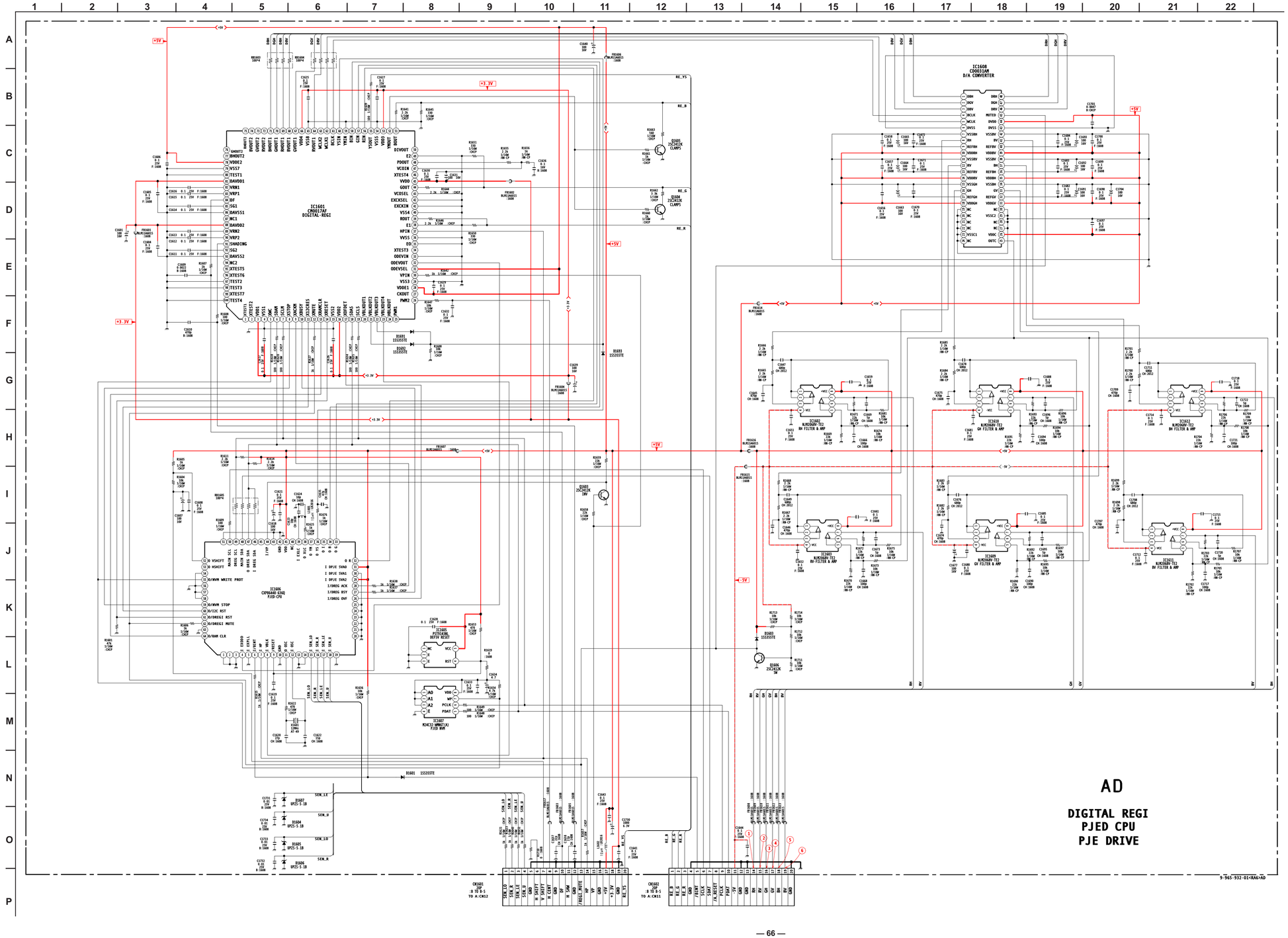


[CONDUCTOR SIDE]

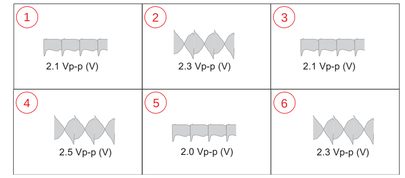


AD BOARD SCHEMATIC DIAGRAM

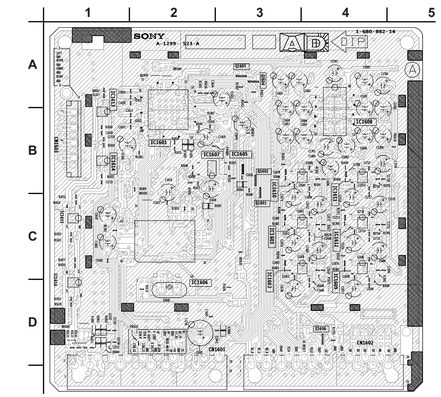
The AD board is not field repairable. If service is required, use the following part number to order a complete replacement board.
A-1299-523-A AD Board, Complete



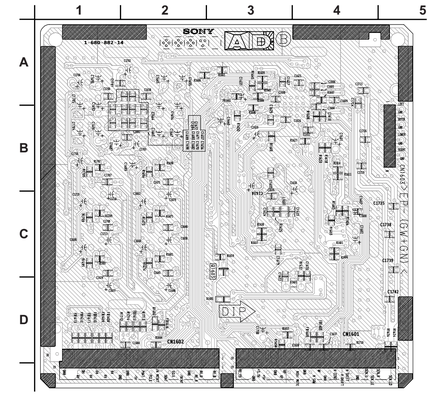
AD BOARD WAVEFORMS



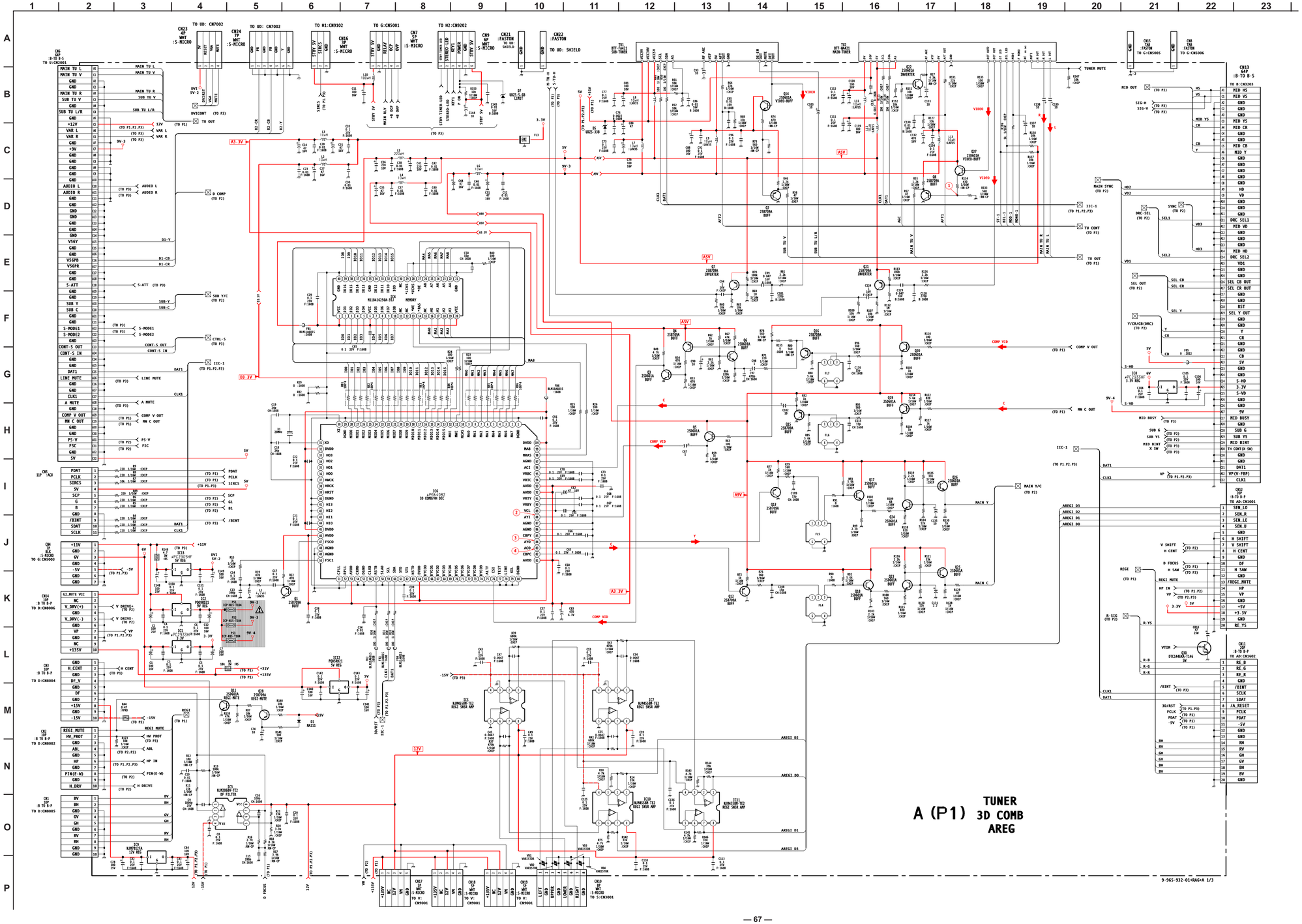
AD [DIGITAL REGI, PJED CPU, PJE DRIVE] [COMPONENT SIDE]



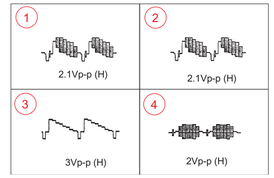
[CONDUCTOR SIDE]



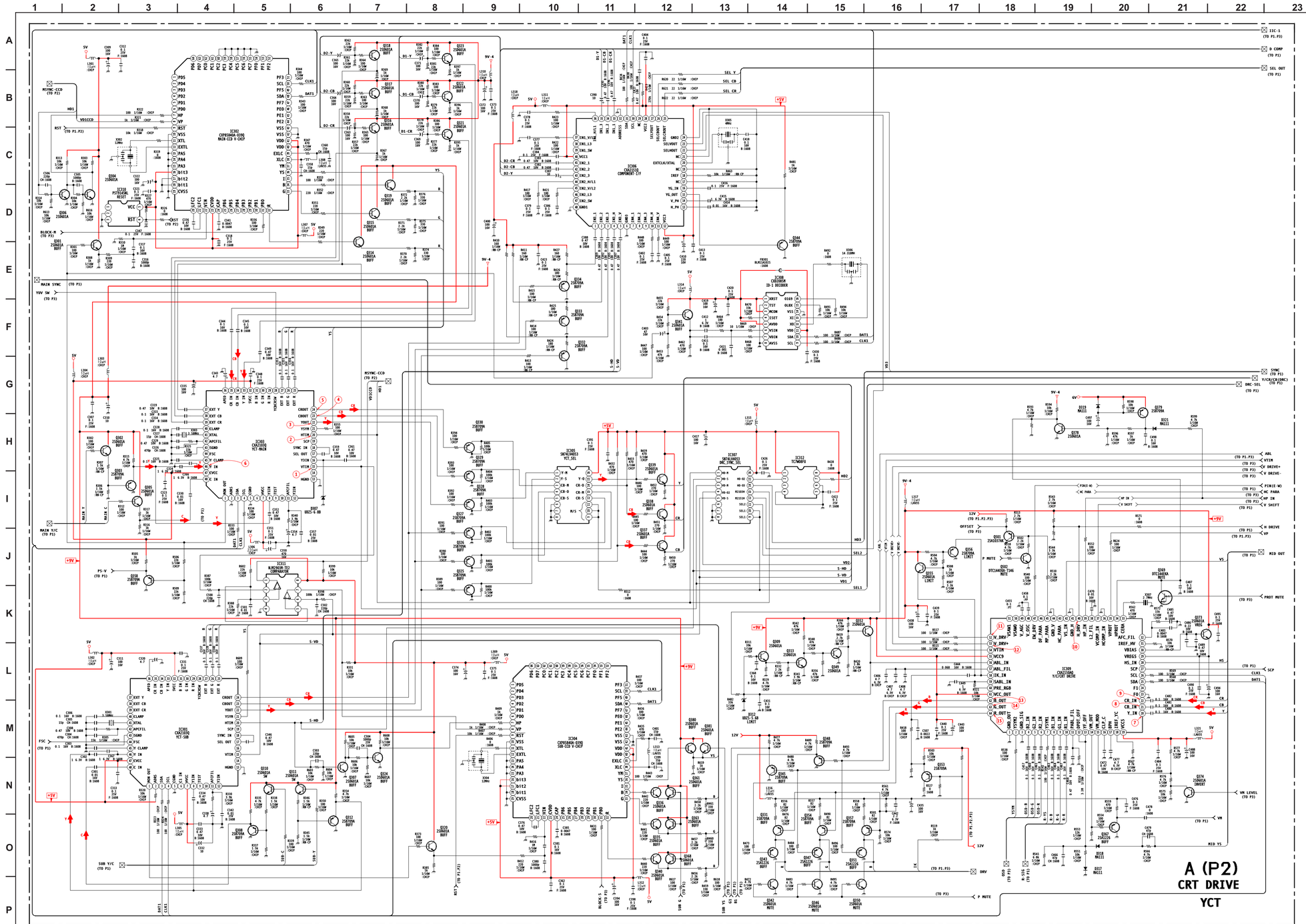
A BOARD SCHEMATIC DIAGRAM (1 OF 3)



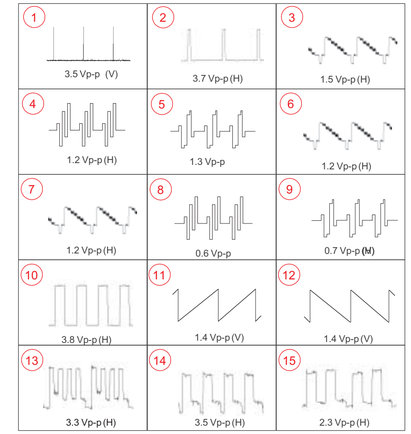
A BOARD WAVEFORMS



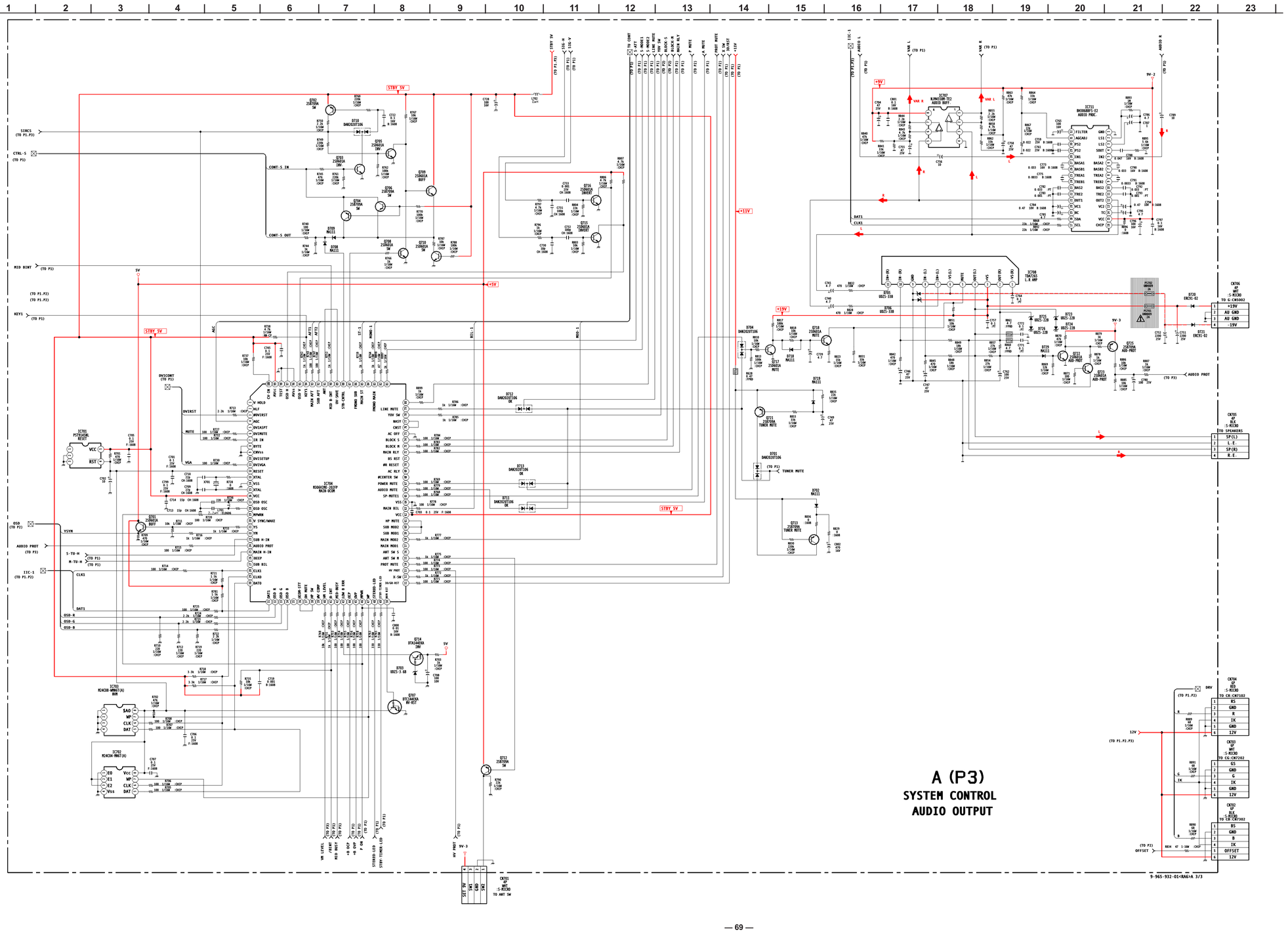
A BOARD SCHEMATIC DIAGRAM (2 OF 3)



A BOARD WAVEFORMS



A BOARD SCHEMATIC DIAGRAM (3 OF 3)



A BOARD IC VOLTAGE LIST

IC1		28	1	26	1.8	76	4.1	4	-15	24	2.2	24	1.6
PIN	VOLT	29	1	27	2	77	GND	5	0.1	25	3.5	25	NC
I	6	30	NC	28	2	78	GND	6	0	26	3.5	26	NC
O	3.3	31	1.9	29	GND	79	0	7	1	27	3.5	27	NC
GND	GND	32	2.5	30	1.4	80	GND	8	12	28	NC	28	NC
IC2		33	1.3	31	1.5	81	3.2	IC11		29	NC	29	NC
PIN	VOLT	34	1.7	32	3.2	82	1	1	1.2	30	NC	30	NC
I	11	35	0	33	NC	83	1.6	2	0.1	31	NC	31	0
O	9	36	1.9	34	NC	84	1.7	3	0.3	32	5	32	0
GND	GND	37	1.8	35	NC	85	1	4	-15	33	NC	33	0
4	11	38	1.8	36	NC	86	0	5	0.2	34	NC	34	0
IC3		39	1.8	37	NC	87	0	6	0	35	NC	35	NC
PIN	VOLT	40	0	38	NC	88	1.3	7	2	36	2.7	36	0
1	1.5	IC5		39	NC	89	0.5	8	12	37	NC	37	NC
2	0	PIN	VOLT	40	GND	90	0.9	IC12		38	NC	38	2.6
3	GND	1	0	41	0	91	1.6	PIN	VOLT	39	NC	39	2.6
4	-15	2	0	42	0	92	3.2	I	6	40	1.7	40	5
5	1.1	3	GND	43	0	93	3.2	O	5	41	1.8	41	5
6	1.1	4	-15	44	0	94	3.2	GND	GND	42	2.6	42	GND
7	0.3	5	GND	45	3.2	95	2	4	6	43	GND	43	GND
8	11.9	6	0	46	3.2	96	2.6	IC13		44	2.5	44	NC
IC4		7	0.1	47	1.7	97	0	PIN	VOLT	45	3.2	45	NC
PIN	VOLT	8	12	48	GND	98	0.5	I	11	46	3	46	NC
1	4.8	IC6		49	GND	99	1.5	O	5	47	4.9	47	NC
2	2	PIN	VOLT	50	1.4	100	3.2	GND	GND	48	3.2	48	4.4
3	2	1	GND	51	0	IC7		IC301		IC302		49	NC
4	1.8	2	1.5	52	0	PIN	VOLT	PIN	VOLT	PIN	VOLT	50	4.3
5	1.9	3	1.5	53	3.2	1	0.1	1	2.3	1	NC	51	NC
6	4.8	4	1.5	54	GND	2	0	2	4.7	2	NC	52	NC
7	1.6	5	1.5	55	GND	3	GND	3	4.4	3	NC	53	NC
8	1.4	6	1.5	56	NC	4	-15	4	4.5	4	NC	54	NC
9	1.1	7	1.5	57	5	5	GND	5	GND	5	NC	55	GND
10	0.8	8	1.5	58	GND	6	0	6	NC	6	NC	56	GND
11	NC	9	1.5	59	4.5	7	0.2	7	5	7	0.4	57	GND
12	NC	10	1	60	4.5	8	12	8	3	8	5	58	GND
13	2.9	11	2.8	61	NC	IC8		9	NC	9	5	59	GND
14	0.5	12	2.4	62	NC	PIN	VOLT	10	NC	10	GND	60	GND
15	NC	13	1.9	63	NC	I	6	11	2.4	11	2.5	61	NC
16	1.5	14	2.5	64	3.2	O	3.3	12	NC	12	2.2	62	NC
17	1.5	15	1.3	65	NC	G	GND	13	GND	13	GND	63	NC
18	1.5	16	1.7	66	NC	IC9		14	NC	14	GND	64	NC
19	1.5	17	1.9	67	NC	PIN	VOLT	15	0.5	15	GND	IC303	
20	4.8	18	1.8	68	NC	I	15	16	NC	16	5	PIN	VOLT
21	0	19	1.9	69	NC	O	12	17	0	17	GND	1	1.8
22	1.5	20	1.8	70	NC	GND	GND	18	3.4	18	GND	2	GND
23	1.5	21	0.9	71	NC	IC10		19	NC	19	GND	3	4.4
24	1.5	22	1.3	72	NC	PIN	VOLT	20	0.5	20	1.7	4	4.4
25	1.5	23	1.4	73	NC	1	0.1	21	0	21	2.6	5	GND
26	1.5	24	1.6	74	NC	2	0	22	2.1	22	2.4	6	NC
27	2.4	25	1.8	75	NC	3	0	23	2.2	23	5	7	4.8

8	2.8	8	5	58	NC	24	GND	6	1.9	38	3.3	5	GND
9	NC	9	5	59	NC	25	2.6	7	1.6	39	0.7	6	GND
10	NC	10	GND	60	NC	26	2.6	8	GND	40	3	7	HD2
11	2.4	11	2.5	61	NC	27	2.6	9	4.3	41	GND	8	5
12	NC	12	2.1	62	NC	28	5	10	3.3	42	0	IC701	
13	GND	13	GND	63	NC	29	NC	11	5	43	2.5	PIN	VOLT
14	NC	14	GND	64	NC	30	4.4	12	2.6	44	GND	1	NC
15	0.4	15	GND	IC305		31	4.4	13	2.4	45	2.1	2	GND
16	2.5	16	5	PIN	VOLT	32	GND	14	GND	46	NC	3	GND
17	2	17	5	1	2.4	33	2.9	15	0	47	3.9	4	5
18	3.1	18	GND	2	0	34	2.9	16	0	48	4.4	5	5
19	NC	19	GND	3	2.8	35	2.9	IC309		49	5.4	IC702	
20	0	20	1.7	4	2.9	36	1	PIN	VOLT	50	NC	PIN	VOLT
21	0	21	2.6	5	0	37	1	1	GND	51	NC	1	GND
22	1.8	22	2.9	6	GND	38	NC	2	0	52	0	2	5
23	2.1	23	5	7	GND	39	NC	3	GND	53	3.5	3	5
24	2.2	24	1.8	8	GND	40	5	4	3.1	54	0.5	4	GND
25	3.6	25	NC	9	4.9	41	2.9	5	3.2	55	9.1	5	4.4
26	3.6	26	NC	10	4.9	42	2.8	6	3.1	56	3.1	6	4.4
27	3.6	27	NC	11	4.9	43	2.1	7	0	57	5	7	5
28	2.9	28	NC	12	0	44	1	8	3.6	58	3.9	8	5
29	NC	29	NC	13	2.8	45	1	9	0	59	1.7	IC703	
30	NC	30	NC	14	2.9	46	NC	10	3.6	60	1.7	PIN	VOLT
31	NC	31	0	15	2.6	47	NC	11	0	61	9	1	GND
32	5	32	0	16	5	48	GND	12	0.4	62	2.7	2	GND
33	3.2	33	0	IC306		IC307		13	0.4	63	2.9	3	GND
34	3.2	34	0	PIN	VOLT	PIN	VOLT	14	2.5	64	2.9	4	GND
35	3.2	35	NC	1	2.9	1	0.5	15	3.8	IC310		5	4.4
36	3.2	36	0	2	2.9	2	0.5	16	2.6	PIN	VOLT	6	4.4
37	3.6	37	NC	3	2.9	3	0.5	17	2.6	1	NC	7	5
38	3.2	38	2.5	4	1.3	4	0.5	18	1.1	2	GND	8	5
39	3.3	39	2.5	5	1	5	0.5	19	5	3	GND	IC704	
40	1.7	40	5	6	GND	6	GND	20	3.6	4	5	PIN	VOLT
41	1.8	41	5	7	NC	7	GND	21	0	5	5	1	NC
42	2.6	42	GND	8	NC	8	GND	22	3.1	IC311		2	NC
43	GND	43	GND	9	NC	9	4.9	23	GND	PIN	VOLT	3	0
44	2.5	44	NC	10	1	10	4.9	24	NC	1	5	4	0
45	3.2	45	NC	11	1	11	0	25	4.4	2	0.4	5	NC
46	2.8	46	NC	12	5	12	0.4	26	4.4	3	2.5	6	0
47	5	47	NC	13	4.1	13	0.5	27	0.7	4	GND	7	4.7
48	3.2	48	SDA	14	4.1	14	0.4	28	0.2	5	2.5	8	GND
IC303		IC304		49	NC	15	3.2	15	0.5	29	5	6	0.5	9	GND
PIN	VOLT	PIN	VOLT	50	SCL	16	2.8	16	5	30	5.7	7	5	10	NC
1	1.8	1	NC	51	NC	17	NC	IC308		31	1.3	8	5	11	0
2	GND	2	NC	52	NC	18	1	PIN	VOLT	32	3.1	IC312		12	4.9
3	4.4	3	NC	53	NC	19	NC	1	5	33	1.6	PIN	VOLT	13	2.3
4	4.4	4	NC	54	NC	20	2.9	2	GND	34	0	1	5	14	GND
5	NC	5	NC	55	NC	21	NC	3	5	35	0.3	2	0.5	15	2.4
6	NC	6	NC	56	NC	22	0.4	4	1.4	36	GND	3	NC	16	4.9
7	0.4	57	NC	23	0.1	5	5	37	2.7	4	GND	17	0		

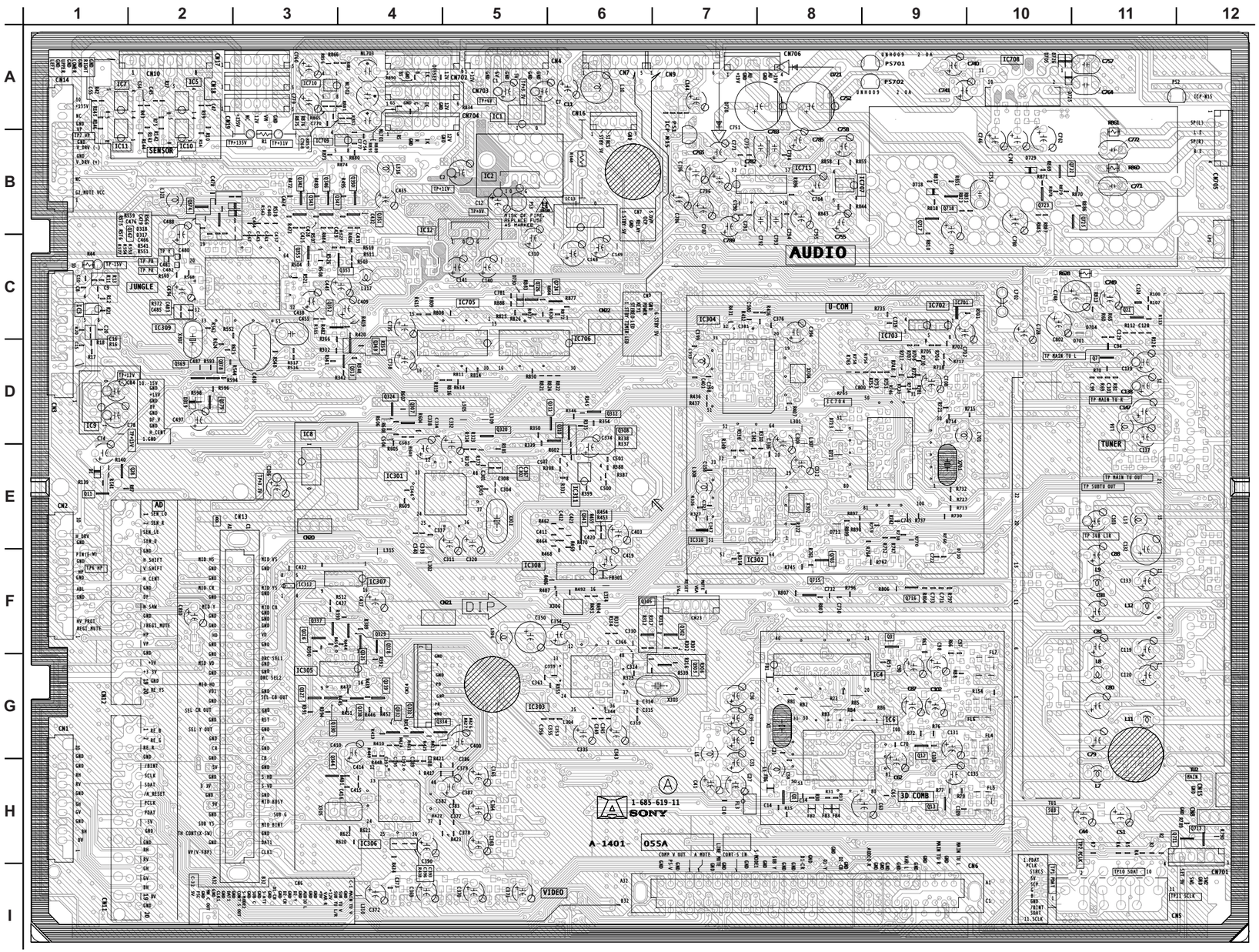
A BOARD IC VOLTAGE LIST (Continued)

18	0	68	NC	6	-19
19	0	69	NC	7	0
20	NC	70	NC	8	0
21	0	71	NC	9	0
22	0	72	6.3	10	0
23	0	73	0	11	0
24	GND	74	0	**IC711**	
25	0	75	GND	**PIN**	**VOLT**
26	NC	76	0	1	GND
27	NC	77	0	2	0
28	4.4	78	0	3	0
29	4.9	79	0	4	4.5
30	4.9	80	NC	5	4.5
31	4.4	81	0	6	4.5
32	0	82	0	7	4.5
33	0	83	0	8	4.5
34	0	84	NC	9	4.5
35	NC	85	0	10	4.5
36	0	86	NC	11	4.5
37	4.6	87	0	12	0
38	0	88	0	13	1.2
39	0	89	0	14	2
40	0	90	0	15	9
41	2.3	91	0	16	9
42	0	92	0	17	4.4
43	4.6	93	0	18	4.4
44	2.8	94	4.6	19	2
45	0.1	95	4.6	20	1.2
46	0	96	GND	21	4.5
47	4.6	97	4.6	22	4.5
48	5	98	GND	23	4.5
49	5	99	4.9	24	4.5
50	0	100	4.6	25	4.5
51	5	**IC707**		26	4.6
52	0	**PIN**	**VOLT**	27	4.5
53	2.8	1	4.8	28	4.5
54	0	2	4.5	29	4.5
55	0	3	4.5	30	4.5
56	NC	4	GND	31	2.9
57	NC	5	4.6	32	4.5
58	0	6	4.5	All voltages are in V.	
59	0	7	4.8		
60	0	8	9		
61	0	**IC708**			
62	4.9	**PIN**	**VOLT**		
63	4.9	1	-19		
64	GND	2	0		
65	0	3	22.1		
66	NC	4	0		
67	0	5	11.6		

A BOARD TRANSISTOR VOLTAGE LIST

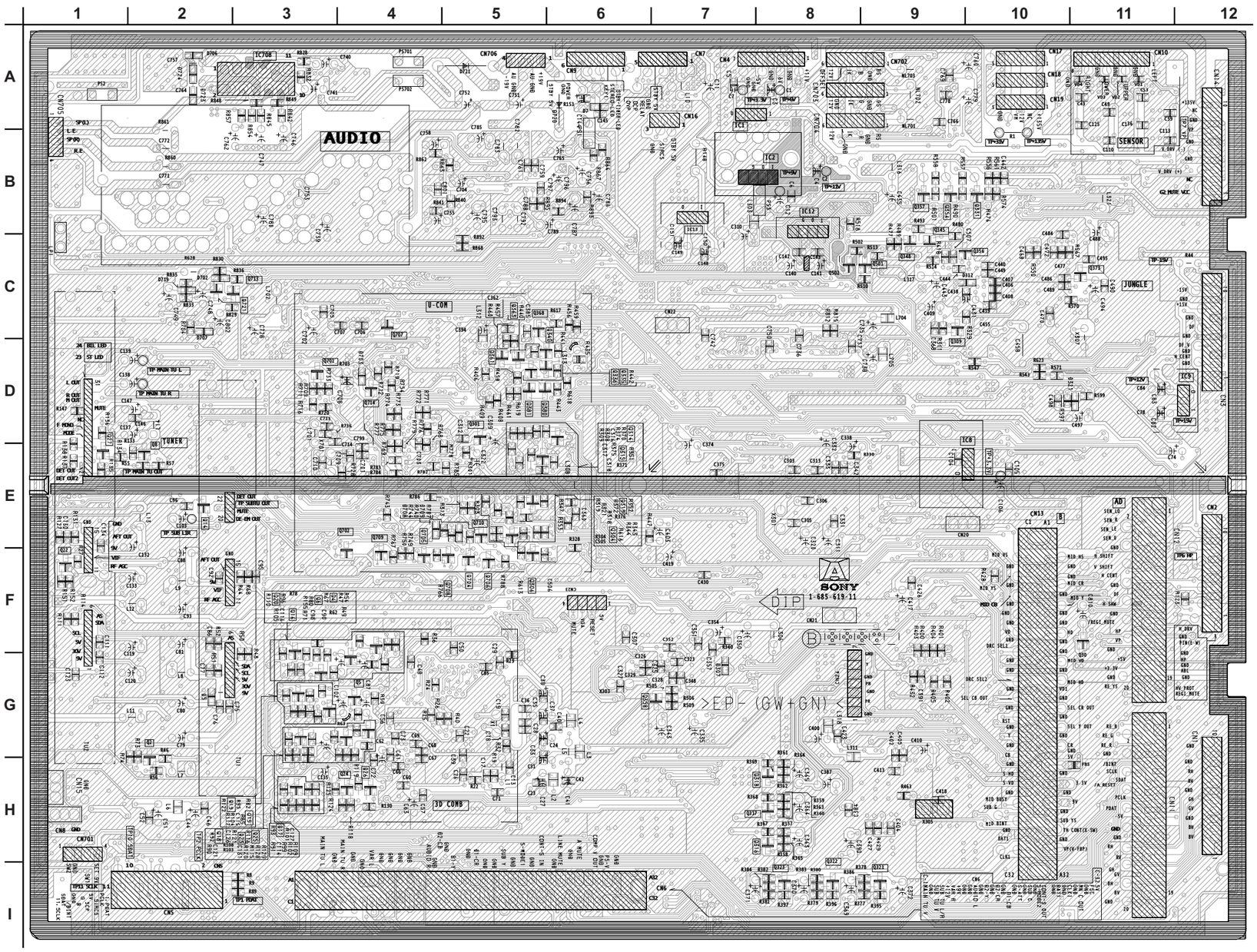
	B	C	E		B	C	E		B	C	E
Q1	1.9	GND	2.5	**Q321**	4.4	9.1	3.8	**Q380**	0	9.1	0
Q2	2.2	2.9	GND	**Q322**	4.4	9.1	3.8	**Q381**	0	9.1	0
Q3	0.1	0	GND	**Q323**	4.4	9.1	3.8	**Q501**	2.1	2.7	GND
Q4	4.8	0.6	5	**Q324**	0.5	0.4	GND	**Q502**	0.8	1.4	GND
Q5	6.2	8.9	5.5	**Q325**	2.2	GND	0	**Q701**	0	5	0
Q6	3.4	4.8	3.7	**Q326**	2.2	GND	0	**Q702**	4.4	4	5
Q7	5.3	0.9	5	**Q327**	2.2	GND	0	**Q703**	0	4.2	GND
Q8	2.4	3	GND	**Q328**	1.8	GND	2.5	**Q704**	4.9	0	0
Q11	0	10.4	GND	**Q329**	2.1	GND	2.8	**Q705**	0.6	0.1	GND
Q12	1.7	GND	2.4	**Q330**	2.2	GND	2.8	**Q706**	4.3	0	0
Q13	1.6	GND	2.3	**Q331**	8.5	3.6	9.2	**Q707**	0	5	GND
Q14	4.7	9	0	**Q332**	2.1	GND	2.8	**Q708**	0	0.1	GND
Q15	2.9	GND	3.5	**Q333**	2.1	GND	2.6	**Q709**	0.1	5	0
Q16	2.8	GND	3.5	**Q334**	2.2	GND	2.8	**Q710**	0.6	0	GND
Q17	2.9	8.9	2.3	**Q335**	0	9.1	0	**Q712**	4.9	0	5
Q18	3	8.9	2.3	**Q336**	0	9.1	0	**Q713**	10.3	0	10.3
Q19	3.7	8.9	3.1	**Q337**	2.4	5	2.2	**Q714**	0	0	4.9
Q20	3.7	8.9	3.1	**Q338**	2.4	5	2.2	**Q715**	0	4.7	GND
Q21	5	0.8	5	**Q339**	2.5	5	1.9	**Q716**	0	5	GND
Q22	0	4.1	GND	**Q340**	0	9.1	0	**Q717**	0.3	13.1	GND
Q23	2.3	6.6	1.7	**Q341**	3.2	5	2.5	**Q718**	12.3	11.6	11.6
Q24	2.3	6	1.8	**Q342**	0	0	GND	**Q721**	10.3	0	10.4
Q25	6.6	8.9	5.9	**Q343**	2.9	GND	3.6	**Q722**	0	9	GND
Q26	6	8.9	5.3	**Q344**	3.2	GND	3.8	**Q723**	0	9	0
Q27	4.8	9	4.2	**Q345**	2.9	GND	3.5	**Q725**	8.9	0	9
Q28	10.4	0	10.2	**Q346**	0	0	GND	All voltages are in V.			
Q30	0	0	GND	**Q347**	2.9	GND	3.7				
Q301	0	5	1.2	**Q348**	2.7	GND	3.3				
Q302	5.4	9.1	4.8	**Q349**	7.9	8.7	GND				
Q303	3.2	GND	6	**Q350**	0	0	GND				
Q304	0.4	0.5	GND	**Q351**	2.7	GND	3.5				
Q305	6	9.1	5.3	**Q352**	7.9	9	3.1				
Q306	0.2	2.5	GND	**Q353**	9.3	0	3.9				
Q307	0.2	2.5	GND	**Q354**	8.5	3.7	9.2				
Q308	2.6	GND	6.6	**Q355**	2.2	9.1	3.9				
Q309	2.9	9.1	8.1	**Q356**	4.4	GND	4				
Q310	3.7	9.1	3.1	**Q357**	8.5	3.4	9.2				
Q311	3.9	9.1	3.3	**Q358**	1.1	GND	1.7				
Q312	1.6	GND	2.3	**Q361**	0	9.1	0				
Q313	7.9	8.8	GND	**Q363**	0	9.1	0				
Q314	0	8.9	0	**Q367**	2.4	GND	3.3				
Q315	0	9	0	**Q368**	0	9.1	0				
Q316	4.4	9.1	3.8	**Q369**	0	0	GND				
Q317	4.4	9.1	3.8	**Q373**	5.7	9.1	5				
Q318	4.4	9.1	3.8	**Q374**	0	2.6	GND				
Q319	0	9.1	0	**Q378**	0.7	0.1	GND				
Q320	2.3	5	1.7	**Q379**	9.1	0.7	9.1				

A [TUNER, 3D COMB, AREG, CRT DRIVE, YCT, SYSTEM CONTROL, AUDIO OUTPUT] [COMPONENT SIDE]

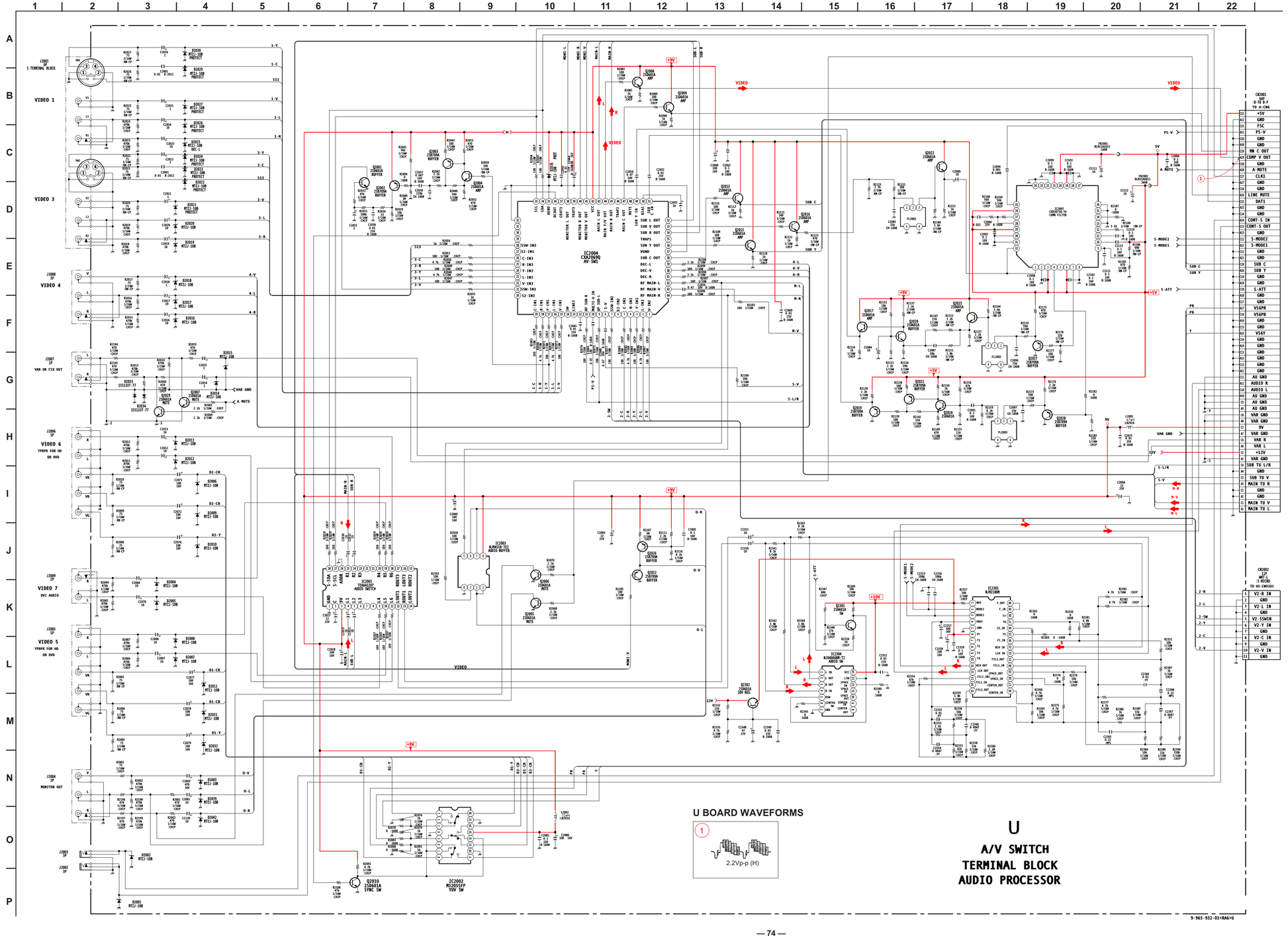


A

[TUNER, 3D COMB, AREG, CRT DRIVE, YCT, SYSTEM CONTROL, AUDIO OUTPUT] [CONDUCTOR SIDE]



U BOARD SCHEMATIC DIAGRAM



U BOARD WAVEFORMS

1

2.2Vp-p (H)

U

A/V SWITCH
TERMINAL BLOCK
AUDIO PROCESSOR

U BOARD IC VOLTAGE LIST

IC2001		IC2003	
PIN	VOLT	PIN	VOLT
1	GND	1	4.5
2	4.5	2	4.5
3	9.0	3	4.4
4	4.5	4	GND
5	4.5	5	4.4
6	4.5	6	4.5
7	NC	7	4.5
8	NC	8	9.0
9	NC	IC2004	
10	4.4	PIN	VOLT
11	4.4	1	3.9
12	4.5	2	4.4
13	4.5	3	3.9
14	NC	4	4.4
15	NC	5	0.5
16	NC	6	NC
17	NC	7	4.9
18	4.4	8	4.5
19	4.4	9	4.4
20	NC	10	4.3
21	NC	11	4.4
22	NC	12	4.4
23	4.4	13	NC
24	4.5	14	NC
25	4.4	15	3.9
26	GND	16	4.4
27	4.4	17	3.9
28	4.4	18	4.4
IC2002		19	4.4
PIN	VOLT	20	NC
1	4.6	21	4.9
2	5.0	22	3.9
3	3.1	23	3.9
4	GND	24	4.4
5	3.1	25	3.9
6	3.1	26	4.4
7	5.0	27	NC
8	4.6	28	0.1
9	4.6	29	NC
10	GND	30	NC
11	4.6	31	NC
12	5.0	32	GND
13	9.0	33	4.4
14	4.6	34	4.4
15	GND	35	GND

37	NC	19	5.0	17	6.0
38	4.5	20	NC	18	6.0
39	NC	21	5.0	19	6.0
40	4.5	22	GND	20	6.0
41	4.4	23	NC	21	6.0
42	9.0	24	GND	22	6.0
43	4.4	25	2.5	23	6.0
44	4.3	26	5.0	24	6.0
45	4.5	27	2.2	25	6.0
46	NC	28	2.2	26	6.0
47	4.4	29	5.0	27	6.0
48	NC	30	GND	28	NC
49	5.3	31	GND	29	6.0
50	4.5	32	1.8	30	6.0
51	4.4	IC2304			
52	4.5	PIN	VOLT		
53	4.9	1	4.5		
54	4.5	2	4.5		
55	NC	3	4.5		
56	4.5	4	4.5		
57	GND	5	8.6		
58	4.3	6	0.3		
59	4.4	7	GND		
60	3.9	8	4.5		
61	4.4	9	4.5		
62	4.4	10	4.5		
63	4.3	11	4.5		
64	4.5	12	0.3		
IC2007		13	8.6		
PIN	VOLT	14	9.0		
1	1.8	IC2305			
GND		PIN	VOLT		
5.0		1	11.1		
3.9		2	0.0		
5.0		3	0.0		
4.4		4	6.0		
NC		5	GND		
2.0		6	10.0		
NC		7	NC		
0.1		8	NC		
1.0		9	NC		
NC		10	NC		
NC		11	6.0		
GND		12	6.0		
0.0		13	6.0		
GND		14	6.0		
NC		15	6.0		

All voltages are in V.

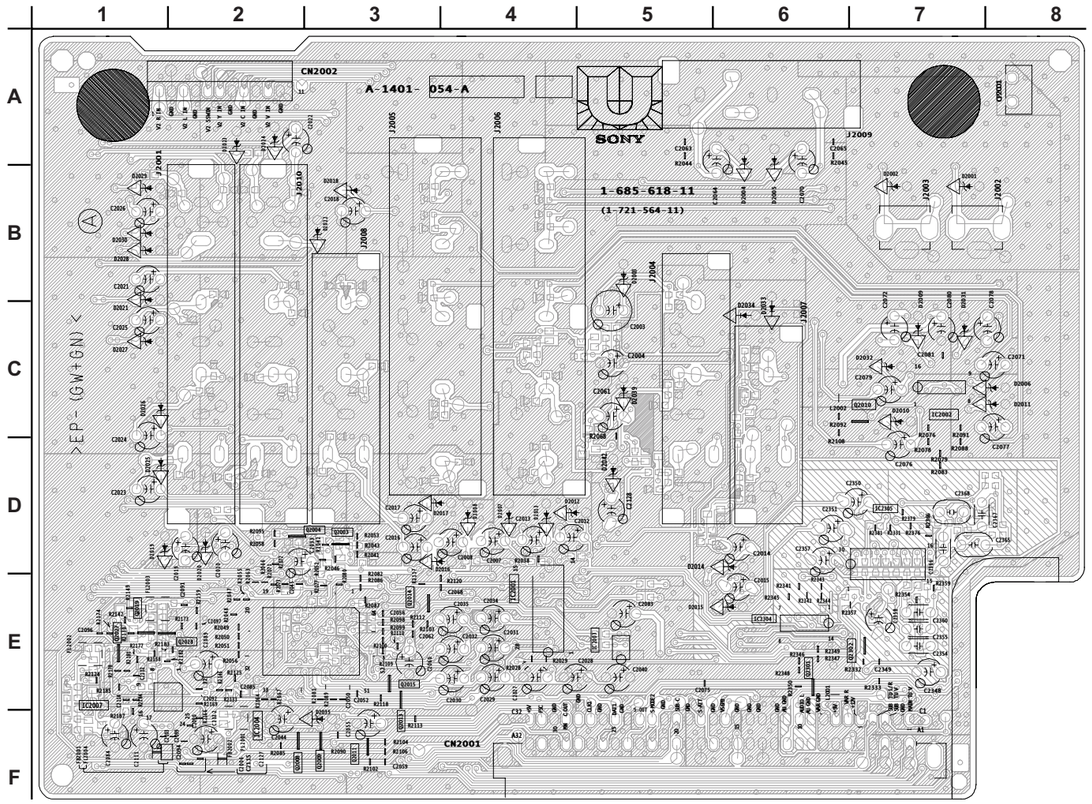
U BOARD TRANSISTOR TABLE

	B	C	E
Q2001	0.1	4.9	GND
Q2002	8.4	0.1	9.0
Q2003	7.8	5.6	8.5
Q2004	3.8	7.8	3.2
Q2005	0.3	0.0	GND
Q2006	0.3	0.0	GND
Q2007	0.4	0.0	0.0
Q2008	4.3	9.0	3.7
Q2009	4.4	9.0	3.7
Q2010	0.0	5.0	GND
Q2012	4.5	GND	5.1
Q2013	4.3	9.0	3.7
Q2015	4.5	9.0	3.9
Q2016	4.7	9.0	8.7
Q2017	5.0	9.0	4.4
Q2019	1.3	GND	2.0
Q2020	1.6	5.0	1.0
Q2021	4.2	1.3	4.8
Q2022	3.3	9.0	2.7
Q2024	1.5	4.2	0.9
Q2025	2.6	9.0	2.0
Q2026	7.2	5.1	7.9
Q2027	1.3	GND	2.0
Q2028	1.1	GND	1.7
Q2029	0.4	0.0	GND
Q2301	3.4	11.9	5.0
Q2302	0.0	12.0	12.0

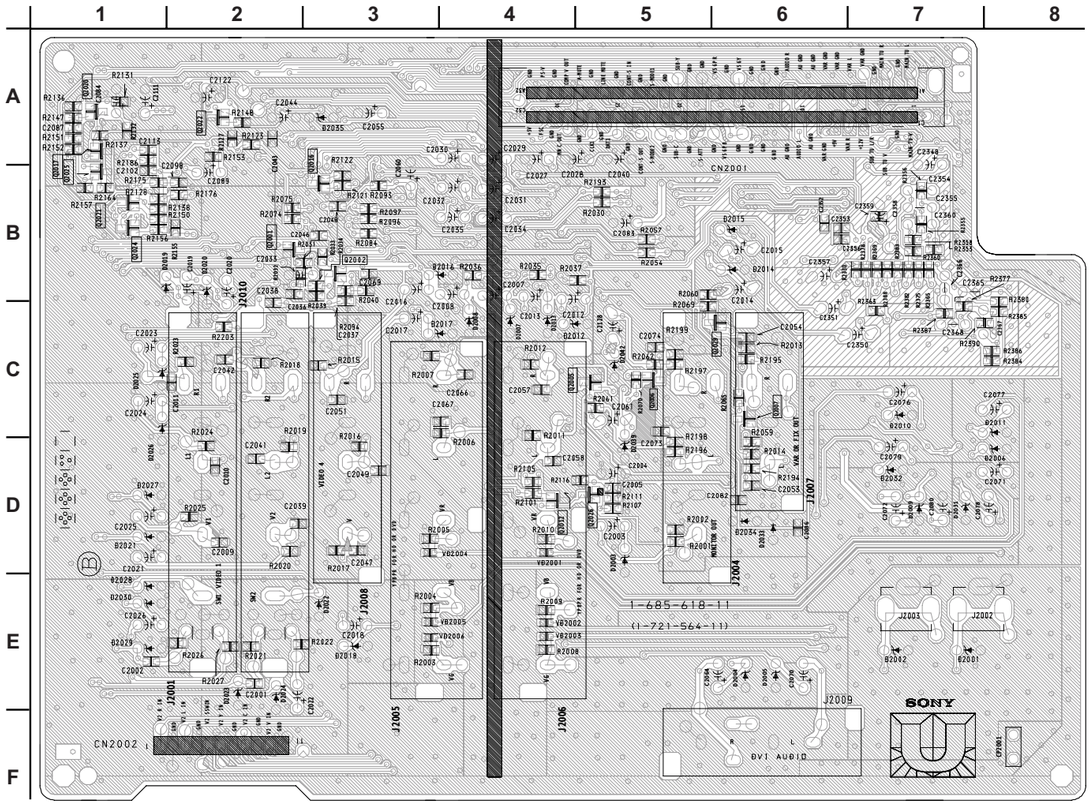
All voltages are in V.

U [AV SWITCH, TERMINAL BLOCK, AUDIO PROCESSOR]

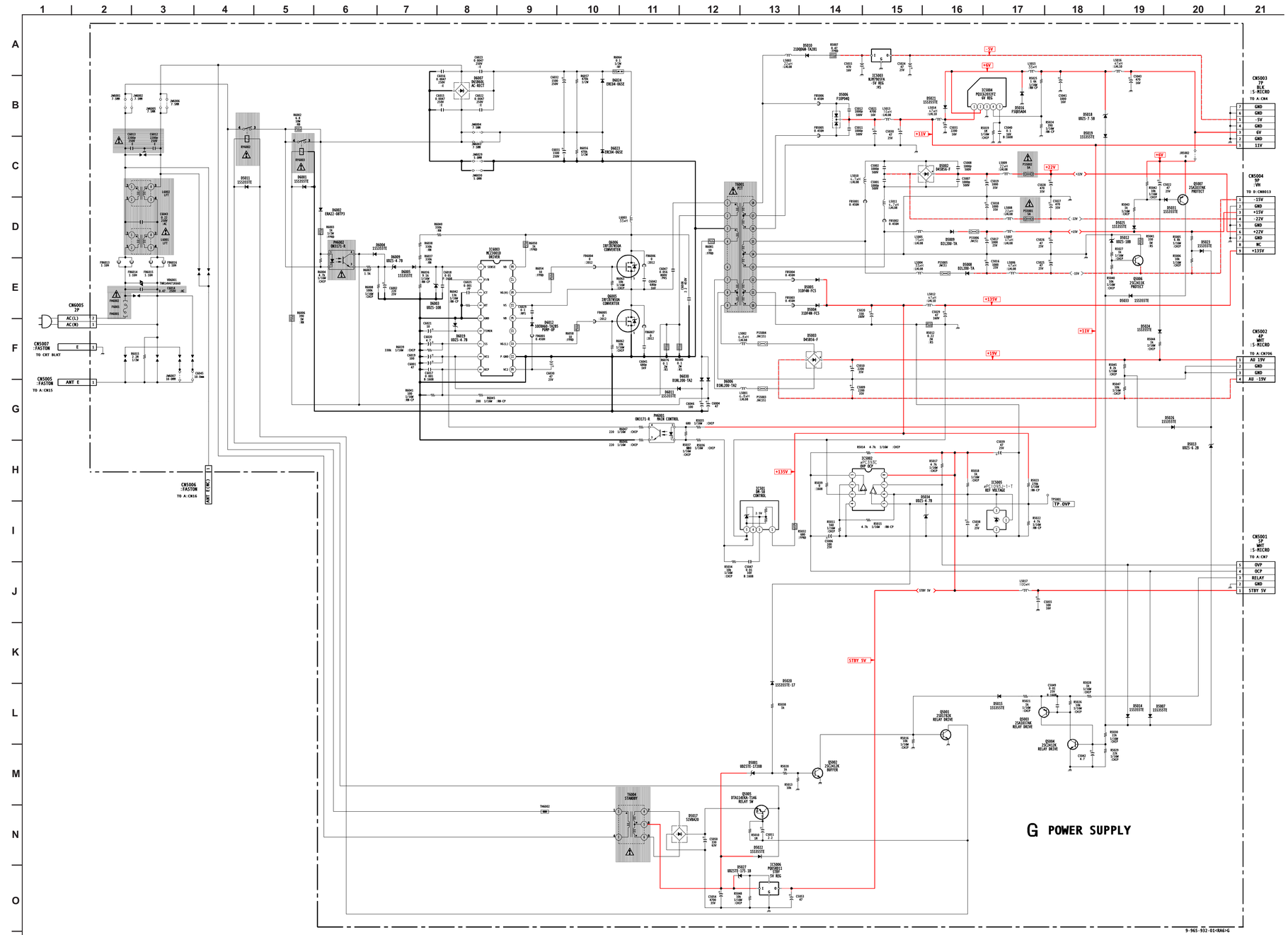
[COMPONENT SIDE]



[CONDUCTOR SIDE]



G BOARD SCHEMATIC DIAGRAM



G BOARD IC VOLTAGE LIST

IC501		IC5004		IC6003	
PIN	VOLT	PIN	VOLT	PIN	VOLT
1	134.4	1	10.4	1	-0.3
3	2.5	2	6.5	2	-0.3
4	7.3	3	GND	3	-0.3
5	GND	4	1.2	4	-0.2
IC5002		5	6.7	5	GND
PIN	VOLT	**IC5005**		6	0.0
1	-0.1	PIN	VOLT	7	0.0
2	0.1	1	2.3	8	0.0
3	0.0	2	0.0	9	0.0
4	-0.1	3	2.3	10	0.0
5	2.2	**IC5006**		11	GND
6	2.3	PIN	VOLT	12	0.0
7	-0.1	I	9.8	13	N/C
8	5.0	O	5.0	14	0.3
IC5003		G	GND	15	0.3
PIN	VOLT			16	0.3
I	-9.0			17	N/C
O	-5.0			18	0.2
G	GND				

All voltages are in V.

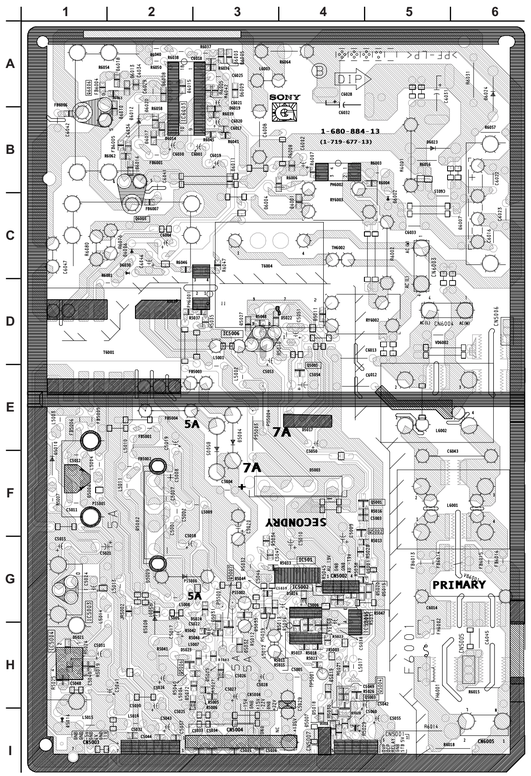
G BOARD TRANSISTOR VOLTAGE LIST

	B	C	E
Q5001	0.7	0	GND
Q5002	0.0	0.7	GND
Q5003	3.0	0.0	3.0
Q5004	0.0	3.0	GND
Q5005	22.3	9.1	22.8
Q5006	-15.0	0.0	-15.0
Q5007	6.2	0.1	6.2

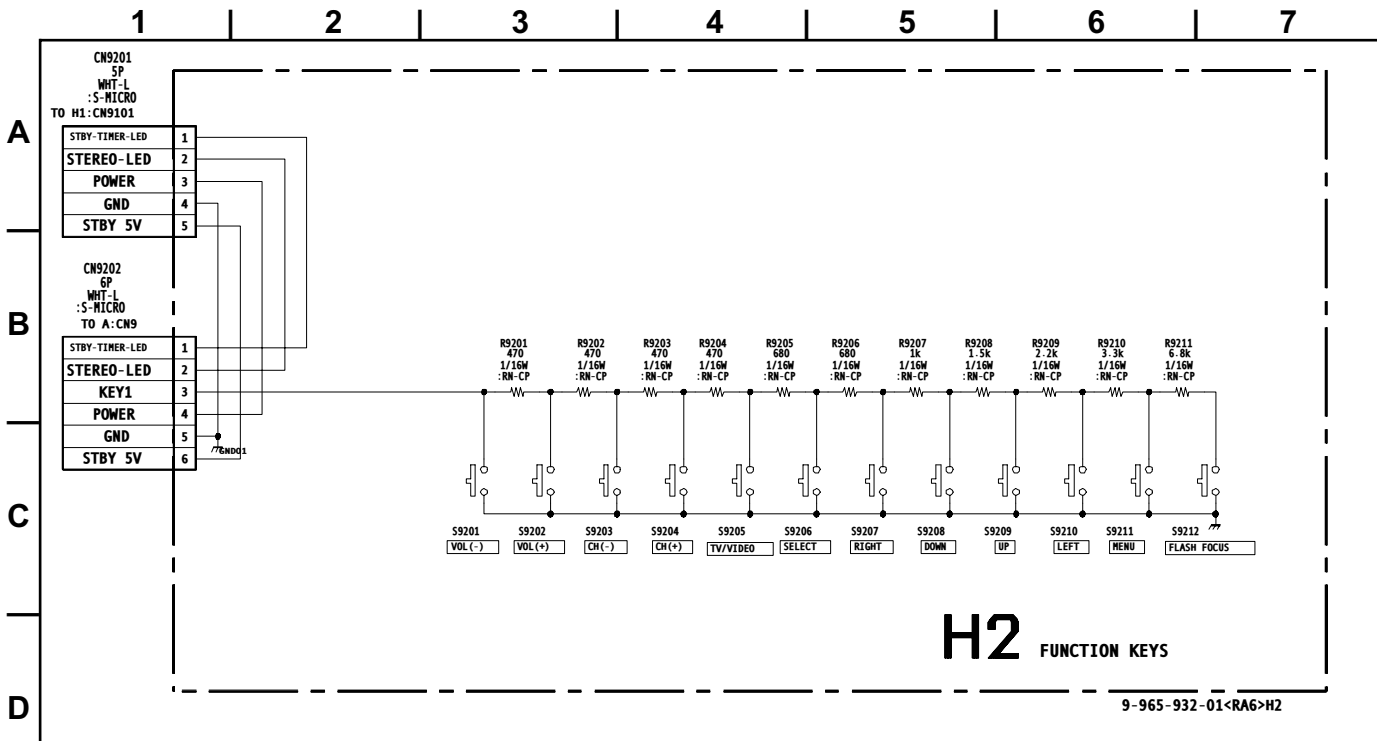
	D	G	S
Q6005	0.3	-0.1	GND
Q6006	0.3	0.3	0.3

All voltages are in V.

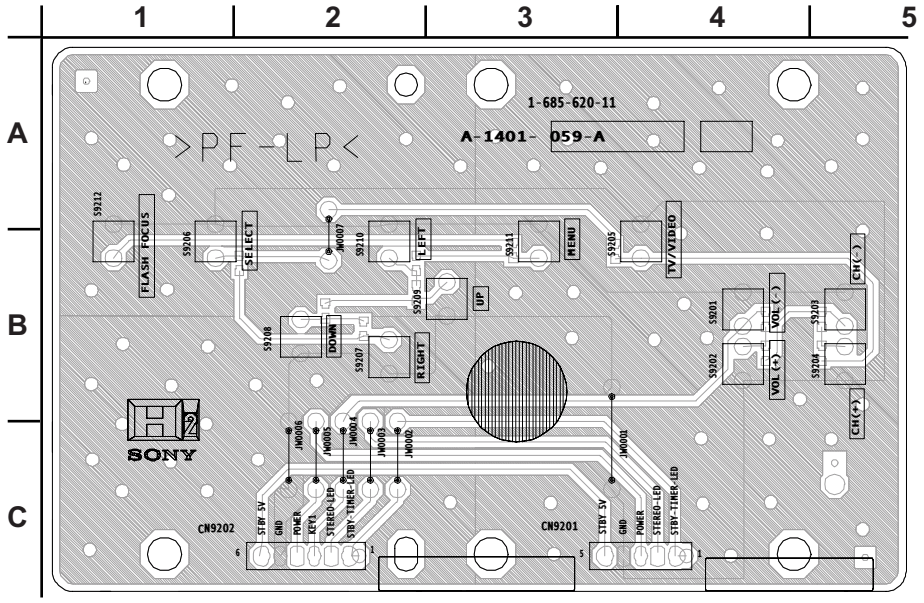
G [POWER SUPPLY] [COMPONENT SIDE]



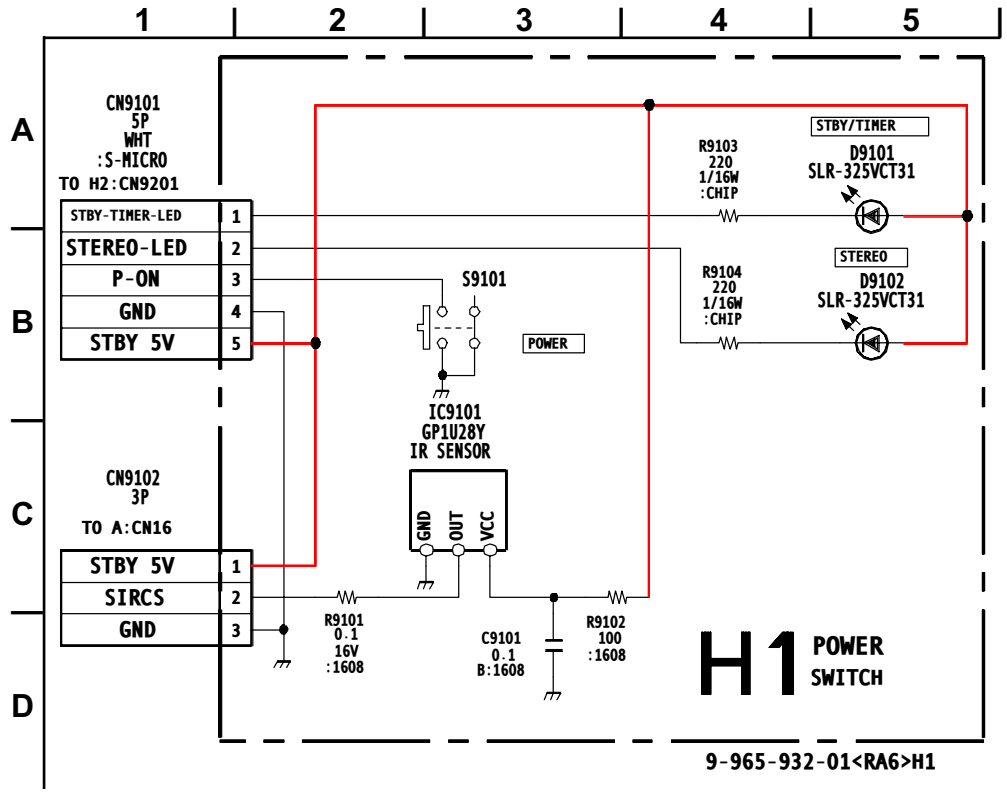
H2 BOARD SCHEMATIC DIAGRAM



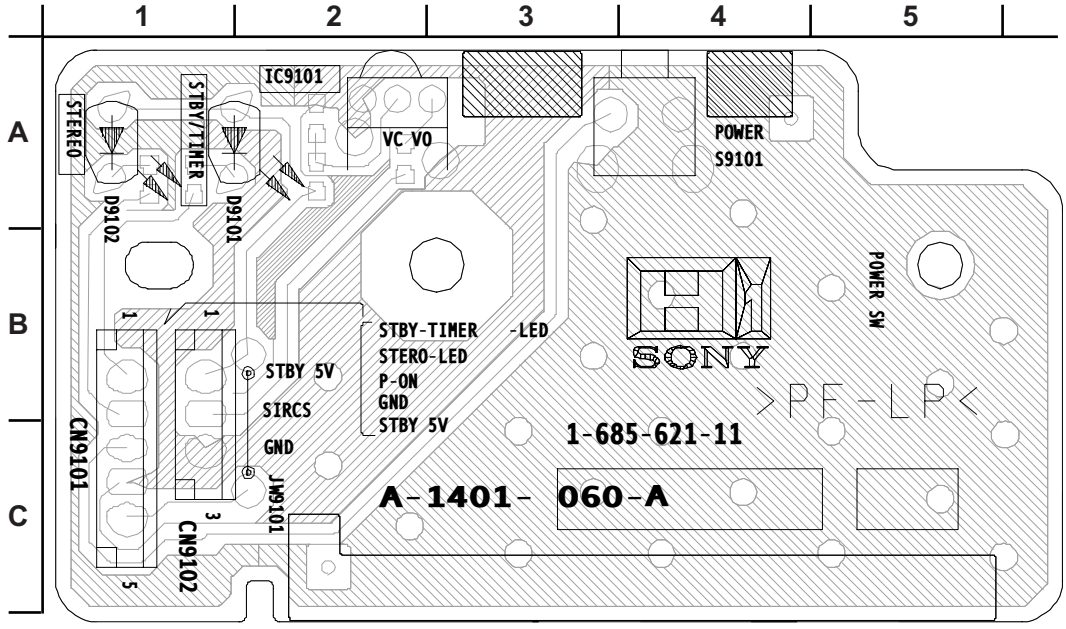
H2 [FUNCTION KEYS] COMPONENT SIDE



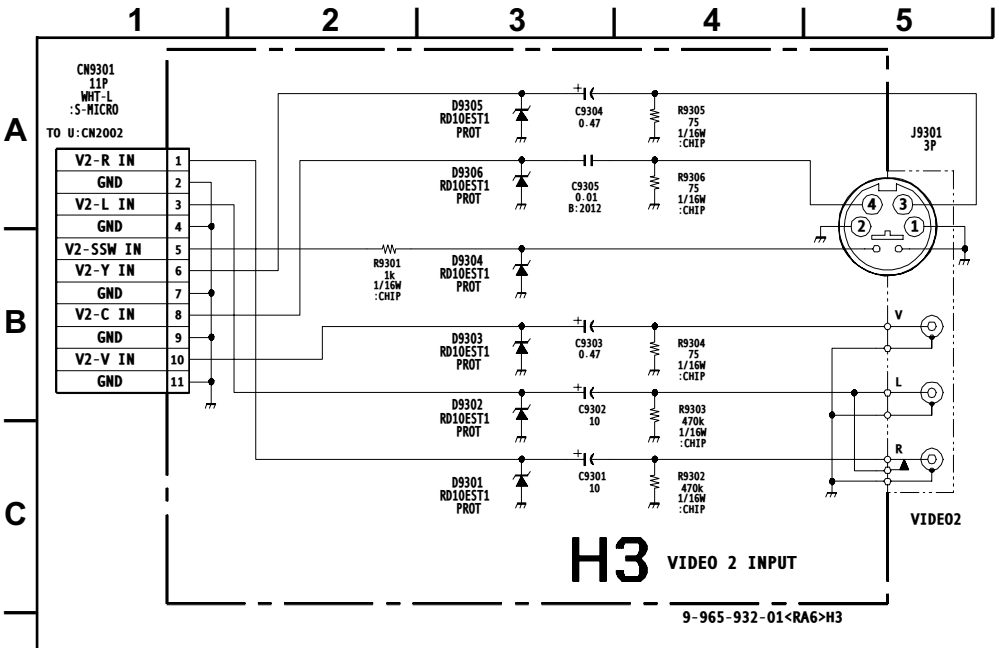
H1 BOARD SCHEMATIC DIAGRAM



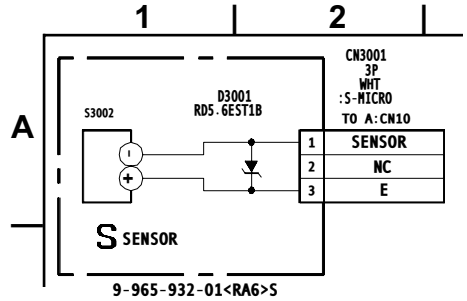
H1 [POWER SWITCH]
COMPONENT SIDE



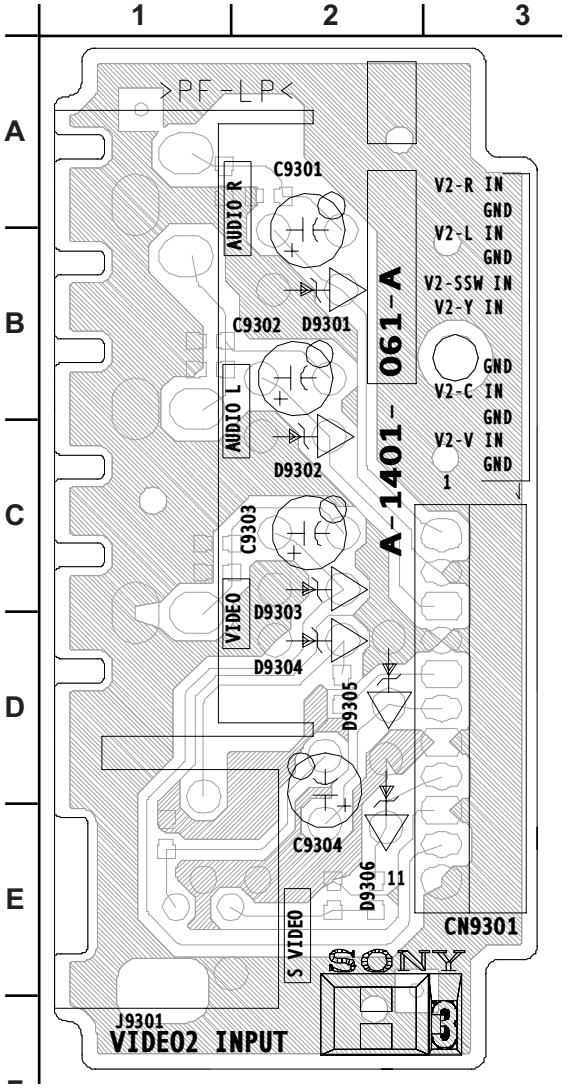
H3 BOARD SCHEMATIC DIAGRAM



S BOARD SCHEMATIC DIAGRAM

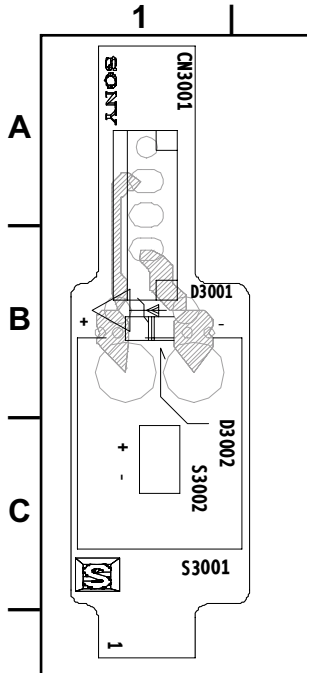


H3 [VIDEO 2 INPUT] COMPONENT SIDE

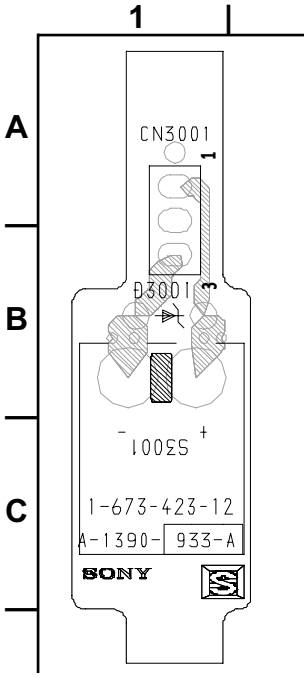


S [SENSOR]

COMPONENT SIDE

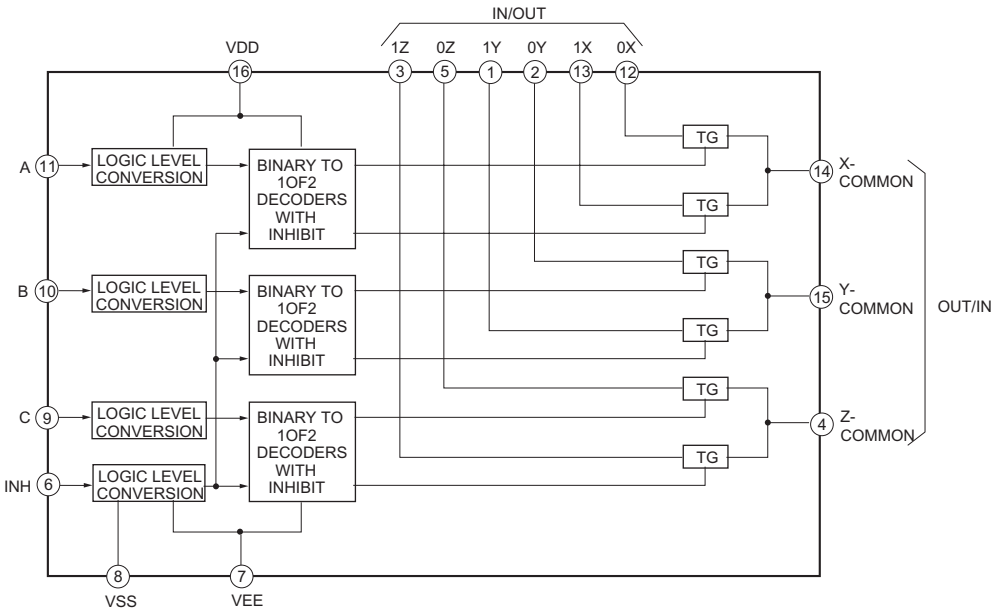


CONDUCTOR SIDE

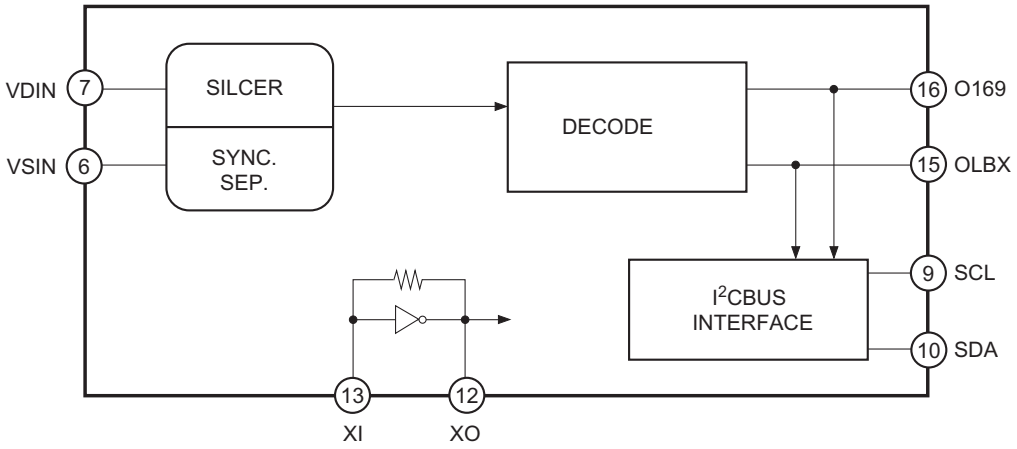


5-5. IC BLOCK DIAGRAMS

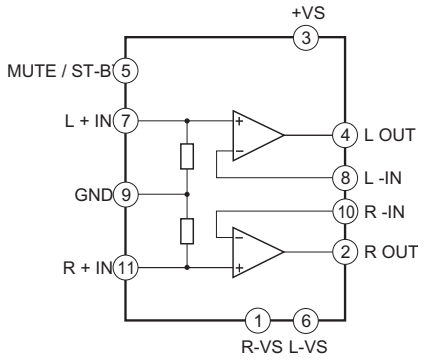
A BOARD: IC305, 307 SN74LV4053ANSR



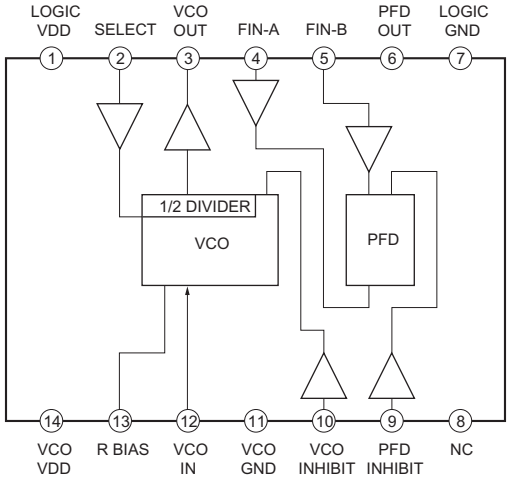
A BOARD: IC308 CXD2085M



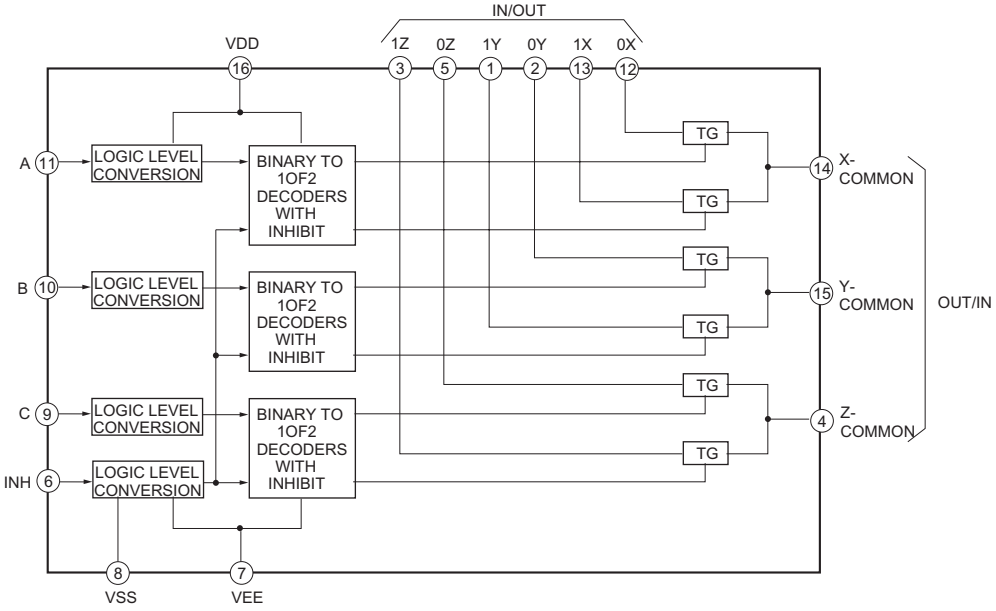
A BOARD: IC305, TDA7265



B BOARD: IC3305, 3404 TLC2932IPWR



B BOARD: IC3413 SN74LV4053ANSR



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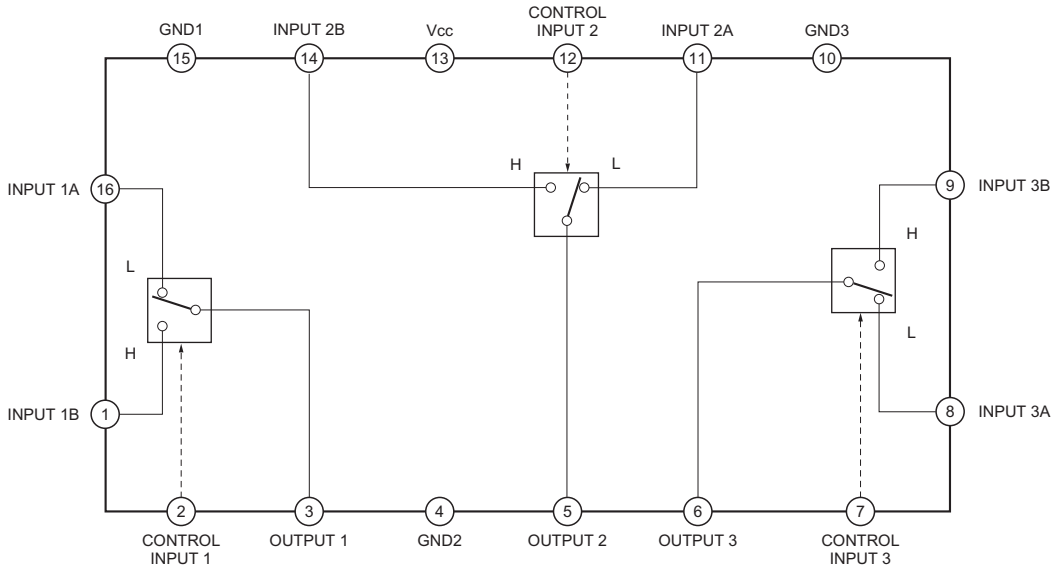
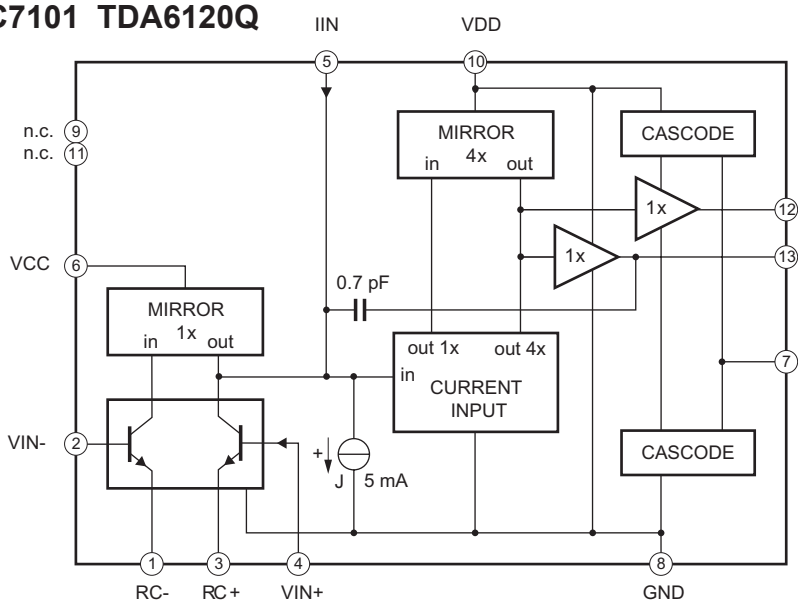


CR BOARD: IC7101 TDA6120Q



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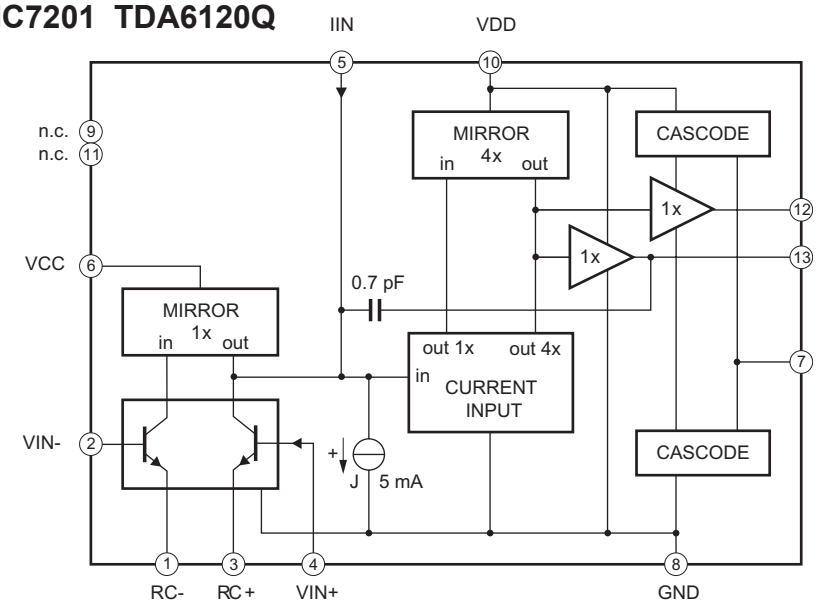

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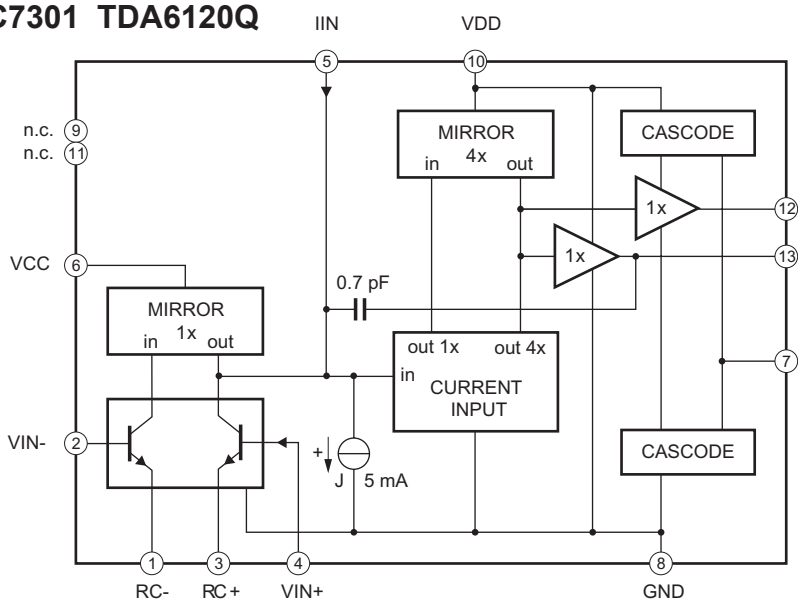

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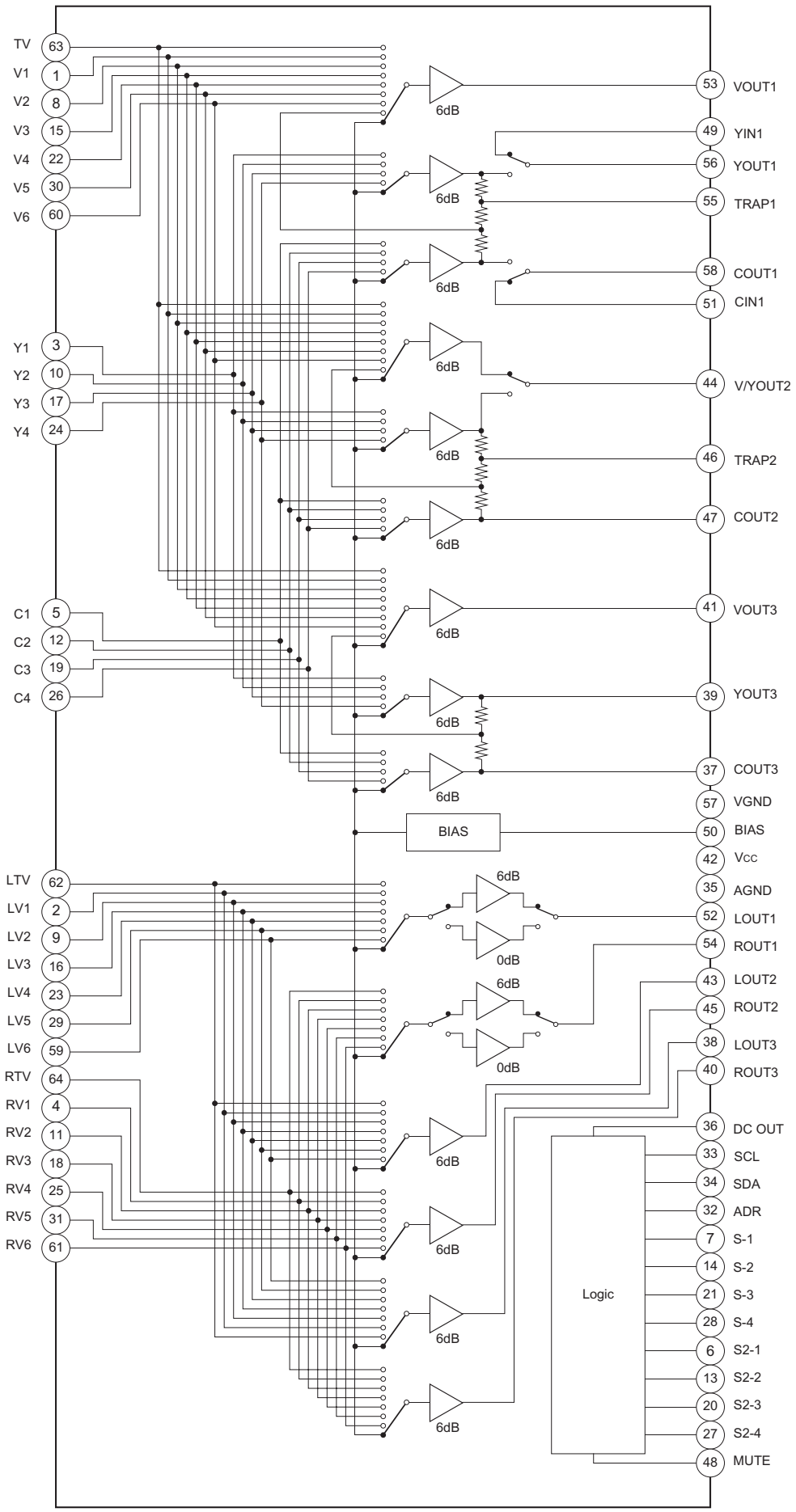

5-6. SEMICONDUCTORS

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RD18ES-B2
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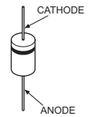

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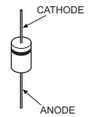
ERC04-06SE
ERC91-02



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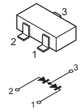

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UDZS-TE-17-22B
UDZS-TE-17-24B
UDZS-TE-17-3.9B
UDZS-TE-17-33B
UDZS-TE-17-4.7B
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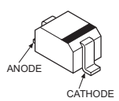

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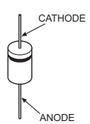

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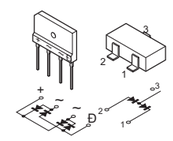

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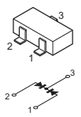

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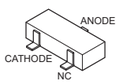

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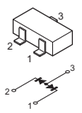

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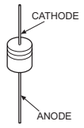

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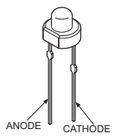

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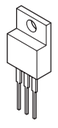

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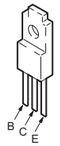

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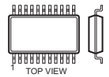

18pin SOP

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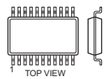

32pin SOP

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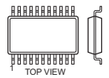

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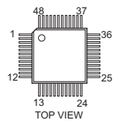

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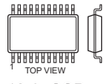

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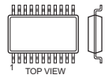

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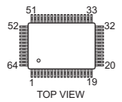

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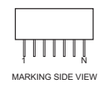

14pin DIP

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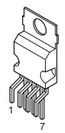

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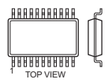

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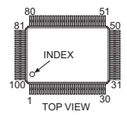

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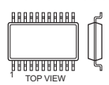

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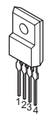

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8pin DIP

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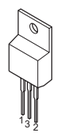

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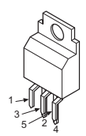

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5pin CHIP

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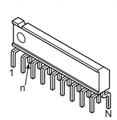
8pin CHIP

TDA6120Q / N2/S2



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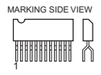

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28pin SOP

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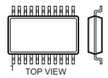

14pin SOP

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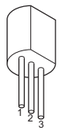

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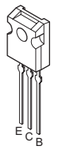

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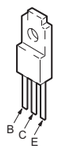
2SC5511



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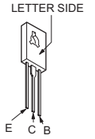

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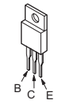
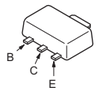
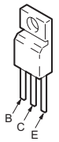


2SK2036(TE85L)



IRFIB7N50A



SECTION 6: EXPLODED VIEWS

Components not identified by a part number or description are not stocked because they are seldom required for routine service.

The component parts of an assembly are indicated by the reference numbers in the far right column of the parts list and within the dotted lines of the diagram.

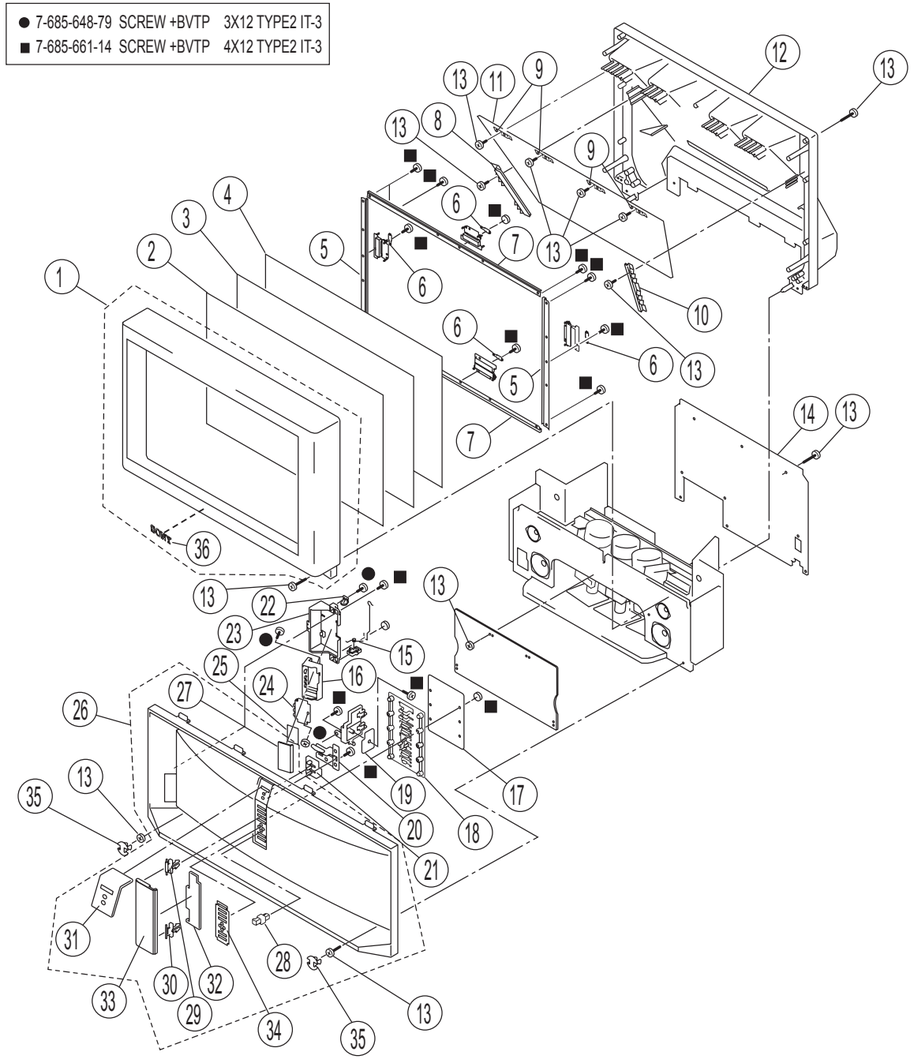
* Items marked with an asterisk are not stocked since they are seldom required for routine service. Expect some delay when ordering these components.

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

6-1. COVER (KP-51WS500/57WS500 ONLY)

● 7-685-648-79 SCREW +BVTP 3X12 TYPE2 IT-3
■ 7-685-661-14 SCREW +BVTP 4X12 TYPE2 IT-3



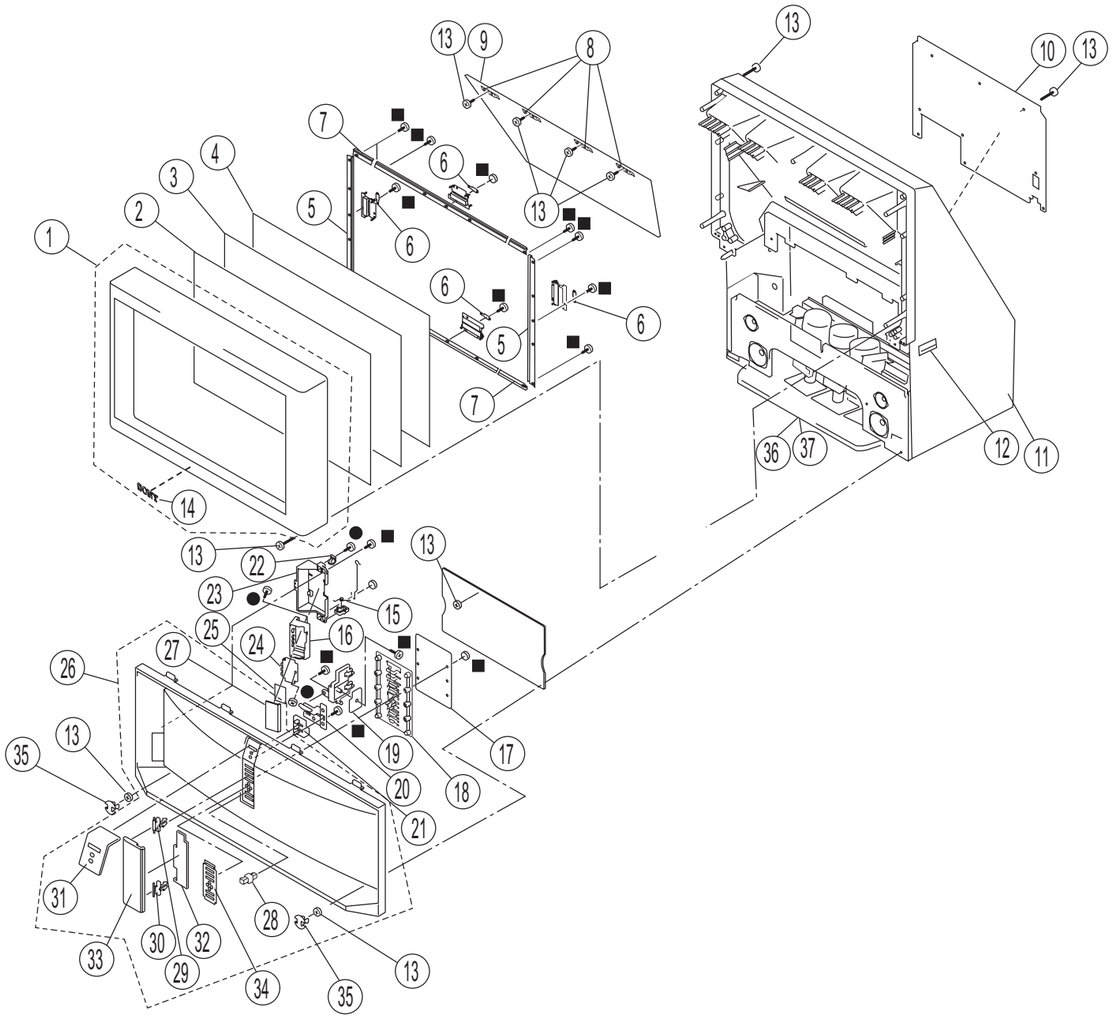
REF.NO.	PART NO.	DESCRIPTION	ASSEMBLY INCLUDES
1	* X-4040-804-1	BEZEL (51) ASSY (KP-51WS500 ONLY)	(36)
1	X-4040-796-1	BEZEL (57) ASSY (KP-57WS500 ONLY)	
2	4-090-910-11	SCREEN (51), CONTRAST (KP-51WS500 ONLY)	
2	4-090-881-11	SCREEN (57), CONTRAST (KP-57WS500 ONLY)	
3	4-081-952-11	PLATE (51WL), DIFFUSION (KP-51WS500 ONLY)	
3	4-081-949-11	PLATE (57WL), DIFFUSION (KP-57WS500 ONLY)	
4	4-081-953-11	PLATE (51WFV), DIFFUSION (KP-51WS500 ONLY)	
4	4-081-950-11	PLATE (57WFV), DIFFUSION (KP-57WS500 ONLY)	
5	* 4-084-617-01	HOLDER, SCREEN (KP-51WS500 ONLY)	
5	* 4-084-568-01	HOLDER, SCREEN (KP-57WS500 ONLY)	
6	* A-1391-148-A	S MOUNTED PC BOARD	
7	* 4-084-617-11	HOLDER, SCREEN (KP-51WS500 ONLY)	
7	* 4-084-568-11	HOLDER, SCREEN (KP-57WS500 ONLY)	
8	* 4-083-460-01	HOLDER (L), MIRROR SIDE (KP-51WS500 ONLY)	
8	* 4-083-462-01	HOLDER (L), MIRROR SIDE (KP-57WS500 ONLY)	
9	* 4-081-501-01	HOLDER, MIRROR	
10	* 4-083-459-01	HOLDER (R), MIRROR SIDE (KP-51WS500 ONLY)	
10	* 4-083-461-01	HOLDER (R), MIRROR SIDE (KP-57WS500 ONLY)	
11	4-084-615-01	MIRROR (51) (KP-51WS500 ONLY)	
11	4-084-561-01	MIRROR (57) (KP-57WS500 ONLY)	
12	* 4-083-467-01	COVER (51), MIRROR (KP-51WS500 ONLY)	
12	4-083-466-01	COVER (57), MIRROR (KP-57WS500 ONLY)	
13	4-081-063-01	SCREW,DOME WASHER HEX TAP 4X20	
14	* 4-090-913-01	BOARD (51), REAR (KP-51WS500 ONLY)	
14	* 4-090-883-01	BOARD (57), REAR (KP-57WS500 ONLY)	
15	4-083-505-01	SPRING, DOOR	
16	4-082-288-02	BRACKET, H3	
17	* A-1401-059-A	H2 MOUNTED PC BOARD	
18	4-082-284-01	BUTTON, MULTI	
19	* A-1401-060-A	H1 MOUNTED PC BOARD	
20	4-082-283-01	BUTTON, POWER	
21	4-083-733-01	GUIDE (HW), LED	
22	4-919-393-01	DAMPER	
23	4-082-289-01	HOLDER, FRONT TERMINAL	
24	* A-1401-061-A	H3 MOUNTED PC BOARD	
25	4-086-330-01	LABEL, FRONT TERMINAL	
26	X-4040-803-1	GRILLE ASSY (51), SPEAKER (KP-51WS500 ONLY)	(27-31)
26	X-4040-794-1	GRILLE ASSY (57), SPEAKER (KP-57WS500 ONLY)	(27-31)
27	4-083-468-01	DOOR, FRONT TERMINAL	
28	4-042-192-01	CATCHER, PUSH	
29	4-045-250-01	DAMPER	
30	3-703-035-11	SHAFT, LID	
31	4-090-018-11	PANEL (ASSY), FRONT	(32)
32	4-090-019-01	DOOR, CONTROL (HW)	
33	4-083-730-01	DOOR (HW), FRONT	
34	4-084-571-03	LABEL (HW), CONTROL	
35	4-083-503-21	SCREW CAP, GRILLE	
36	3-704-179-01	EMBLEM (NO.10), SONY (KP-51WS500 ONLY)	
36	4-381-079-01	EMBLEM (NO.10), SONY (KP-57WS500 ONLY)	

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

6-2. COVER (KP-65WS500 0NLY)

● 7-685-648-79 SCREW +BVTP 3X12 TYPE2 IT-3
■ 7-685-661-14 SCREW +BVTP 4X12 TYPE2 IT-3



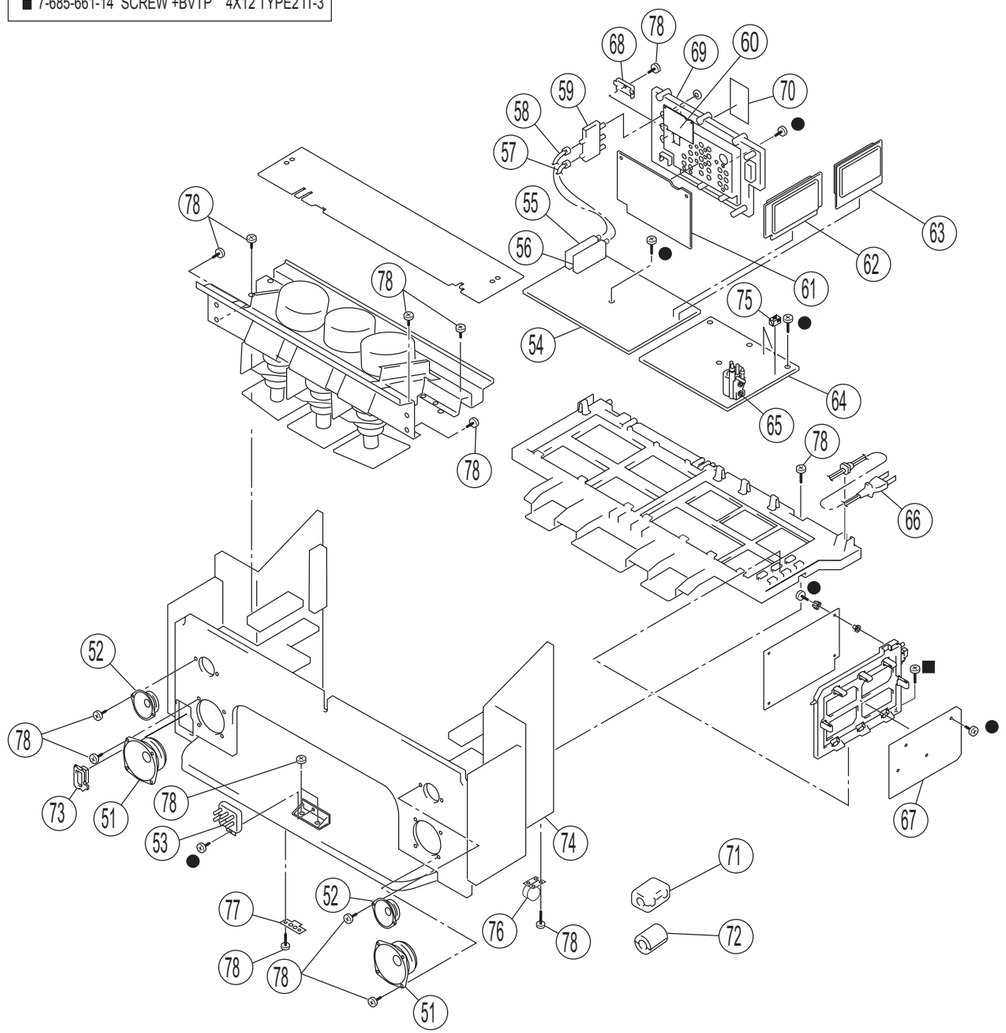
REF.NO.	PART NO.	DESCRIPTION	ASSEMBLY INCLUDES
1	X-4040-807-1	BEZNET (65) ASSY	(14)
2	4-090-915-11	SCREEN (65), CONTRAST	
3	4-089-151-11	PLATE (65WL), DIFFUSION	
4	4-089-152-11	PLATE (65WFV), DIFFUSION	
5	* 4-088-461-01	HOLDER, SCREEN	
6	* A-1391-148-A	S MOUNTED PC BOARD	
7	* 4-089-179-01	HOLDER, SCREEN SHORT	
8	4-088-580-01	HOLDER, MIRROR BASE	
9	* 4-088-577-01	MIRROR	
10	* 4-090-919-01	BOARD, REAR	
11	X-4040-808-1	CABINET ASSY	
12	4-088-541-01	HANDLE	
13	4-081-063-01	SCREW,DOME WASHER HEX TAP 4X20	
14	4-381-079-01	EMBLEM (NO.10), SONY	
15	4-083-505-01	SPRING, DOOR	
16	4-082-288-02	BRACKET, H3	
17	* A-1401-059-A	H2 MOUNTED PC BOARD	
18	4-082-284-01	BUTTON, MULTI	
19	* A-1401-060-A	H1 MOUNTED PC BOARD	
20	4-082-283-01	BUTTON, POWER	
21	4-083-733-01	GUIDE (HW), LED	
22	4-919-393-01	DAMPER	
23	4-082-289-01	HOLDER, FRONT TERMINAL	
24	* A-1401-061-A	H3 MOUNTED PC BOARD	
25	4-086-330-01	LABEL, FRONT TERMINAL	
26	X-4040-806-1	GRILLE ASSY (65), SPEAKER	(27-31)
27	4-083-468-01	DOOR, FRONT TERMINAL	
28	4-042-192-01	CATCHER, PUSH	
29	4-045-250-01	DAMPER	
30	3-703-035-11	SHAFT, LID	
31	4-090-018-11	PANEL (ASSY), FRONT	(32)
32	4-090-019-01	DOOR, CONTROL (HW)	
33	4-083-730-01	DOOR (HW), FRONT	
34	4-084-571-03	LABEL (HW), CONTROL	
35	4-083-503-21	SCREW CAP, GRILLE	
36	4-063-421-02	LATCH (K)	
37	4-030-850-01	SOCKET, CASTER	

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

6-3. CHASSIS

● 7-685-648-79 SCREW +BVTP 3X12 TYPE2 IT-3
■ 7-685-661-14 SCREW +BVTP 4X12 TYPE2 IT-3



REF.NO.	PART NO.	DESCRIPTION
51	1-825-218-11	LOUDSPEAKER (13CM)
52	1-529-403-31	SPEAKER (6.6CM) (KP-51WS500\57WS500 ONLY)
52	1-529-403-41	SPEAKER (6.6CM) (KP-65WS500 ONLY)
⚠ 53	1-223-925-11	RESISTOR ASSY (HIGH-VOLTAGE)
54	* A-1300-550-A	A COMPLETE PC BOARD
55	8-598-593-50	TUNER, FSS BTF-WA421
56	8-598-594-30	TUNER, FSS BTF-FA421
57	* 1-557-056-31	CABLE, P-P
58	* 1-556-945-21	CABLE, P-P
⚠ 59	1-771-787-13	SWITCH, RF ANTENNA
60	* A-1300-324-A	UD COMPLETE PC BOARD
61	* A-1300-551-A	U COMPLETE PC BOARD
62	* A-1136-271-A	B COMPLETE BOARD
63	* A-1299-523-A	AD COMPLETE BOARD
⚠ 64	* A-1300-417-A	D COMPLETE BOARD
	The high voltage leads associated with the FBT on the D Board are not included and must be ordered separately.	
⚠ 65	1-453-285-41	FBT ASSY NX-4006
⚠	1-779-095-51	LEAD ASSY, HIGH-VOLTAGE
⚠	1-900-260-40	CONNECTOR ASSY, MV
⚠ 66	1-790-001-12	CORD, AC POWER (WITH CONNECTOR

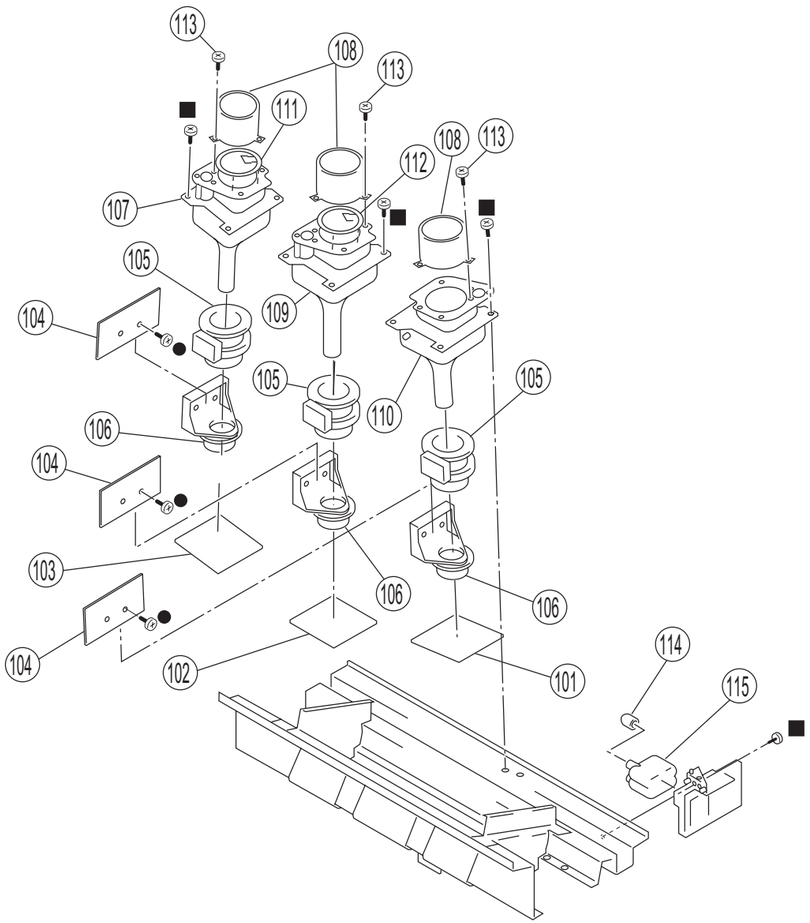
REF.NO.	PART NO.	DESCRIPTION
67	* A-1316-566-A	G COMPLETE BOARD
68	4-069-675-01	CAP, TERMINAL BOARD
69	4-089-438-01	BOARD, TERMINAL
70	4-089-194-01	LABEL, TERMINAL
71	1-500-603-11	CLAMP, FERRITE (KP-57WS500\65WS500 ONLY)
72	1-500-082-11	CLAMP, SLEEVE FERRITE
73	* 4-084-570-01	COVER, CABINET (HW)
74	* X-4039-330-2	CABINET (51) ASSY, BOTTOM (KP-51WS500 ONLY)
74	* X-4040-795-1	CABINET ASSY, BOTTOM (57) (KP-57WS500 ONLY)
75	3-710-578-01	COVER, VOLUME, 6 MOLD
76	4-040-755-01	CASTER (DIA. 30) (KP-51WS500\57WS500 ONLY)
76	3-184-556-01	CASTER (KP-65WS500 ONLY)
77	4-075-020-01	FOOT, PLASTIC (KP-51WS500\57WS500 ONLY)
78	4-081-063-01	SCREW,DOME WASHER HEX TAP 4X20

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

6-4. PICTURE TUBE

■ 7-685-663-71 SCREW +BVTP 4X16 TYPE2 IT-3



REF.NO.	PART NO.	DESCRIPTION
101	* A-1401-058-A	CB MOUNTED PC BOARD
102	* A-1401-057-A	CG MOUNTED PC BOARD
103	* A-1401-056-A	CR MOUNTED PC BOARD
104	* A-1342-598-A	V MOUNT
⚠ 105	1-451-542-21	DEFLECTION YOKE (KP-51WS500 ONLY)
⚠ 105	1-451-536-21	DEFLECTION YOKE (KP-57WS500 ONLY)
⚠ 105	1-451-537-22	DEFLECTION YOKE (KP-65WS500 ONLY)
⚠ 106	1-452-790-31	NECK ASSY
⚠ 107	8-733-650-15	CRT 07MVC31(R)-L(FL) (KP-51WS500 ONLY)
⚠ 107	8-733-648-15	CRT 07MVC41(R)-L(FL) (KP-57WS500 ONLY)
⚠ 107	8-733-666-05	CRT 07MVC61(R)-L(FL) (KP-65WS500 ONLY)
108	4-083-751-01	LENS (DELTA 250) (KP-51WS500 ONLY)
108	4-083-750-01	LENS (DELTA 260) (KP-57WS500 ONLY)
108	4-087-842-01	LENS (DELTA 270) (KP-65WS500 ONLY)
⚠ 109	8-733-652-15	CRT 07MVC21(G)-L(FL)
⚠ 110	8-733-649-15	CRT 07MVC31(B)-L(FL) (KP-51WS500 ONLY)
⚠ 110	8-733-647-15	CRT 07MVC41(B)-L(FL) (KP-57WS500 ONLY)
⚠ 110	8-733-665-05	CRT 07MVC61(B)-L(FL) (KP-65WS500 ONLY)
111	4-088-542-01	SHADE (R) (KP-57WS500/65WS500 ONLY)
112	4-088-543-01	SHADE (G) (KP-57WS500/65WS500 ONLY)
113	4-081-063-01	SCREW, DOME WASHER HEX TAP (4 X 20)
114	4-373-137-01	CAP (Z), RUBBER
⚠ 115	8-598-955-32	BLOCK ASSY, HV HVB-1031

SECTION 7: ELECTRICAL PARTS LIST

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The components in this manual identified by the following symbol: ⋈ indicate parts that have been carefully factory-selected to satisfy regulations regarding X-ray radiation for each set.

Should replacement be required for one of these components, replace only with the value originally used.

*** Items marked with an asterisk are not stocked since they are seldom required for routine service. Expect some delay when ordering these components.**

RESISTORS
- **All resistors are in ohms**
- **F : nonflammable**
- **All variable and adjustable resistors have characteristic curve B, unless otherwise noted.**

When ordering parts by reference number, please include the board name.

REF. NO.	PART NO.	DESCRIPTION	VALUES		
V					
*	A-1342-598-A	V BOARD, MOUNT			
	4-382-854-11	SCREW (M3X10), P, SW (+)			
*	7-651-000-50	GREASE,SILICON (G-746) 200G			
	CAPACITOR				
C9002	1-104-999-11	MYLAR	0.1µF	10%	200V
C9003	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C9006	1-126-935-11	ELECT	470µF	20%	6.3V
C9007	1-126-933-11	ELECT	100µF	20%	16V
C9008	1-126-935-11	ELECT	470µF	20%	6.3V
C9009	1-126-933-11	ELECT	100µF	20%	16V
C9010	1-107-667-11	ELECT	2.2µF	20%	160V
C9011	1-107-364-11	MYLAR	0.01µF	10%	200V
C9012	1-107-364-11	MYLAR	0.01µF	10%	200V
C9013	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C9014	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C9015	1-126-935-11	ELECT	470µF	20%	16V
C9017	1-104-999-11	MYLAR	0.1µF	10%	200V
C9018	1-107-638-11	ELECT	33µF	20%	160V
C9019	1-126-935-11	ELECT	470µF	20%	16V
	CONNECTOR				
* CN9001	1-564-508-11	PLUG,CONNECTOR		5P	
* CN9002	1-770-723-11	CONNECTOR, BOARD TO BOARD		8P	
	DIODE				
D9001	8-719-988-61	DIODE 1SS355TE-17			
D9002	8-719-988-61	DIODE 1SS355TE-17			
D9003	8-719-988-61	DIODE 1SS355TE-17			
D9004	8-719-988-61	DIODE 1SS355TE-17			
D9005	8-719-510-02	DIODE D1NS4-TR			
D9006	8-719-110-56	DIODE RD22ES-T1B			
D9007	8-719-110-56	DIODE RD22ES-T1B			
	COIL				
L9001	1-412-525-31	INDUCTOR	10µH		
	TRANSISTOR				
Q9002	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR			
Q9003	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR			
Q9004	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR			
Q9005	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR			
Q9006	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR			
Q9007	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR			
Q9008	8-729-045-04	TRANSISTOR 2SC5511			
Q9009	8-729-045-05	TRANSISTOR 2SA2005			
	RESISTOR				
R9002	1-216-805-11	METAL CHIP	47	5%	1/10W
R9004	1-216-820-11	METAL CHIP	820	5%	1/10W
R9005	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R9006	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R9007	1-216-809-11	METAL CHIP	100	5%	1/10W
R9008	1-216-803-11	METAL CHIP	33	5%	1/10W
R9009	1-216-809-11	METAL CHIP	100	5%	1/10W
R9010	1-216-813-11	METAL CHIP	220	5%	1/10W
R9011	1-216-864-11	SHORT CHIP	0		
R9012	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R9013	1-216-805-11	METAL CHIP	47	5%	1/10W
R9014	1-216-805-11	METAL CHIP	47	5%	1/10W
R9015	1-216-833-11	METAL CHIP	10K	5%	1/10W
R9016	1-249-414-11	CARBON	560	5%	1/4W
R9017	1-249-435-11	CARBON	33K	5%	1/4W
R9018	1-249-435-11	CARBON	33K	5%	1/4W
R9019	1-249-414-11	CARBON	560	5%	1/4W
R9020	1-216-799-11	METAL CHIP	15	5%	1/10W

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

V CR

REF. NO.	PART NO.	DESCRIPTION	VALUES		
R9021	1-216-799-11	METAL CHIP	15	5%	1/10W
R9022	1-249-421-11	CARBON	2.2K	5%	1/4W
R9023	1-249-421-11	CARBON	2.2K	5%	1/4W
R9024	1-249-405-11	CARBON	100	5%	1/4W
R9025	1-249-385-11	CARBON	2.2	5%	1/4W
R9027	1-249-385-11	CARBON	2.2	5%	1/4W
R9028	1-249-405-11	CARBON	100	5%	1/4W
R9029	1-215-913-11	METAL OXIDE	220	5%	3W
R9030	1-249-377-11	CARBON	0.47	5%	1/4W
R9031	1-249-385-11	CARBON	2.2	5%	1/4W
R9032	1-249-385-11	CARBON	2.2	5%	1/4W
R9033	1-249-436-11	CARBON	39K	5%	1/4W
R9034	1-249-436-11	CARBON	39K	5%	1/4W

CR

*	**A-1401-056-A**	**CR BOARD, MOUNTED**	
	4-382-854-11	SCREW (M3X10), P, SW (+)	
*	7-651-000-50	GREASE,SILICON (G-746) 200G	

CAPACITOR

C7101	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7102	1-101-003-00	CERAMIC	0.0047µF		50V
C7103	1-104-570-11	CERAMIC	0.001µF	10%	2KV
C7104	1-107-662-11	ELECT	22µF	20%	250V
C7105	1-162-918-11	CERAMIC CHIP	18pF	5%	50V
C7106	1-126-768-11	ELECT	2200µF	20%	16V
C7107	1-161-830-00	CERAMIC	0.0047µF		500V
C7108	1-101-003-00	CERAMIC	0.0047µF		50V
C7109	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7110	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7111	1-126-933-11	ELECT	100µF	20%	16V
C7112	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7113	1-101-003-00	CERAMIC	0.0047µF		50V
C7114	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V

CONNECTOR

*	CN7102	1-564-509-11	PLUG,CONNECTOR	6P
*	CN7103	1-564-510-11	PLUG,CONNECTOR	7P
	CN7104	1-785-879-11	CONNECTOR, ONE TOUCH	
	CN7105	1-695-915-11	TAB (CONTACT)	
	CN7107	1-695-915-11	TAB (CONTACT)	
⚠	CN7108	1-251-182-11	SOCKET, CRT	

REF. NO.	PART NO.	DESCRIPTION	VALUES

DIODE

D7101	8-719-404-50	DIODE MA111-TX
D7102	8-719-901-83	DIODE 1SS83TD
D7103	8-719-901-83	DIODE 1SS83TD

IC

IC7101	8-759-680-01	IC TDA6120Q/N2/S1

COIL

L7101	1-469-555-21	INDUCTOR	10µH
L7102	1-414-855-31	INDUCTOR	1µH
L7103	1-414-855-31	INDUCTOR	1µH

TRANSISTOR

Q7101	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX
Q7102	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX
Q7103	8-729-048-50	TRANSISTOR 2SK3018-T106

RESISTOR

R7101	1-260-132-11	CARBON	560K	5%	1/2W
R7102	1-216-813-11	METAL CHIP	220	5%	1/10W
R7103	1-218-693-11	METAL CHIP	1.1K	0.50%	1/16W
R7104	1-218-696-11	METAL CHIP	1.5K	0.50%	1/16W
R7105	1-219-743-11	METAL	100	5%	1/2W
R7106	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R7107	1-260-133-11	CARBON	680K	5%	1/2W
R7108	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R7109	1-216-815-11	METAL CHIP	330	5%	1/10W
R7110	1-218-703-11	METAL CHIP	3K	0.50%	1/16W
R7111	1-218-710-11	METAL CHIP	5.6K	0.50%	1/16W
R7112	1-218-748-11	METAL CHIP	220K	0.50%	1/16W
R7113	1-218-748-11	METAL CHIP	220K	0.50%	1/16W
R7114	1-215-925-11	METAL OXIDE	22K	5%	3W
R7115	1-260-328-11	CARBON	1K	5%	1/2W
R7116	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R7118	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R7119	1-260-320-11	CARBON	220	5%	1/2W
R7120	1-218-710-11	METAL CHIP	5.6K	0.50%	1/16W
R7121	1-249-425-11	CARBON	4.7K	5%	1/4W
R7122	1-260-087-11	CARBON	100	5%	1/2W

SPARK GAP

SG7101	1-519-422-11	GAP, SPARK
SG7102	1-517-729-31	GAP, SPARK
SG7103	1-519-421-11	GAP, DISCHARGE

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

CG CB

REF. NO.	PART NO.	DESCRIPTION	VALUES		

CG

*	**A-1401-057-A**	**CG BOARD, MOUNTED**			
	4-382-854-11	SCREW (M3X10), P, SW (+)			
*	7-651-000-50	GREASE,SILICON (G-746) 200G			
		CAPACITOR			
	C7201	1-164-156-11	CERAMIC CHIP	0.1µF	25V
	C7202	1-101-003-00	CERAMIC	0.0047µF	50V
	C7203	1-104-570-11	CERAMIC	0.001µF 10%	2KV
	C7204	1-107-662-11	ELECT	22µF 20%	250V
	C7205	1-162-920-11	CERAMIC CHIP	27pF 5%	50V
	C7206	1-101-003-00	CERAMIC	0.0047µF	50V
	C7207	1-126-768-11	ELECT	2200µF 20%	16V
	C7208	1-164-156-11	CERAMIC CHIP	0.1µF	25V
	C7209	1-164-156-11	CERAMIC CHIP	0.1µF	25V
	C7210	1-126-933-11	ELECT	100µF 20%	16V
	C7211	1-164-156-11	CERAMIC CHIP	0.1µF	25V
	C7212	1-161-830-00	CERAMIC	0.0047µF	500V
	C7213	1-101-003-00	CERAMIC	0.0047µF	50V
	C7214	1-162-966-11	CERAMIC CHIP	0.0022µF 10%	50V
		CONNECTOR			
*	CN7202	1-564-509-11	PLUG,CONNECTOR	6P	
*	CN7203	1-564-510-11	PLUG,CONNECTOR	7P	
*	CN7204	1-564-510-11	PLUG,CONNECTOR	7P	
	CN7205	1-785-879-11	CONNECTOR, ONE TOUCH		
	CN7206	1-695-915-11	TAB (CONTACT)		
	CN7208	1-695-915-11	TAB (CONTACT)		
⚠	CN7209	1-251-182-11	SOCKET, CRT		
		DIODE			
	D7201	8-719-404-50	DIODE MA111-TX		
	D7202	8-719-901-83	DIODE 1SS83TD		
	D7203	8-719-901-83	DIODE 1SS83TD		
		IC			
	IC7201	8-759-680-01	IC TDA6120Q/N2/S1		
		COIL			
	L7201	1-469-555-21	INDUCTOR	10µH	
	L7202	1-414-855-31	INDUCTOR	1µH	
	L7203	1-414-855-31	INDUCTOR	1µH	
		TRANSISTOR			
	Q7201	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX		
	Q7202	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX		
	Q7203	8-729-048-50	TRANSISTOR 2SK3018-T106		
		RESISTOR			
	R7201	1-216-813-11	METAL CHIP	220 5%	1/10W
	R7202	1-218-693-11	METAL CHIP	1.1K 0.50%	1/16W
	R7203	1-218-696-11	METAL CHIP	1.5K 0.50%	1/16W
	R7204	1-260-132-11	CARBON	560K 5%	1/2W
	R7205	1-216-825-11	METAL CHIP	2.2K 5%	1/10W
	R7206	1-219-743-11	METAL	100 5%	1/2W
	R7207	1-218-690-11	METAL CHIP	820 0.50%	1/16W
	R7208	1-260-133-11	CARBON	680K 5%	1/2W
	R7209	1-216-815-11	METAL CHIP	330 5%	1/10W
	R7210	1-218-700-11	METAL CHIP	2.2K 0.50%	1/16W
	R7211	1-218-708-11	METAL CHIP	4.7K 0.50%	1/16W
	R7212	1-218-746-11	METAL CHIP	180K 0.50%	1/16W
	R7213	1-218-746-11	METAL CHIP	180K 0.50%	1/16W
	R7214	1-215-925-11	METAL OXIDE	22K 5%	3W
	R7215	1-216-829-11	METAL CHIP	4.7K 5%	1/10W
	R7216	1-216-823-11	METAL CHIP	1.5K 5%	1/10W
	R7217	1-260-328-11	CARBON	1K 5%	1/2W
	R7219	1-260-320-11	CARBON	220 5%	1/2W
	R7220	1-218-710-11	METAL CHIP	5.6K 0.50%	1/16W
	R7221	1-249-425-11	CARBON	4.7K 5%	1/4W
	R7222	1-260-087-11	CARBON	100 5%	1/2W
		SPARK GAP			
	SG7201	1-519-422-11	GAP, SPARK		
	SG7202	1-517-729-31	GAP, SPARK		
	SG7203	1-519-421-11	GAP, DISCHARGE		

CB

*	**A-1401-058-A**	**CB BOARD, MOUNTED**			
	4-382-854-11	SCREW (M3X10), P, SW (+)			
*	7-651-000-50	GREASE,SILICON (G-746) 200G			
		CAPACITOR			
	C7301	1-162-970-11	CERAMIC CHIP	0.01µF 10%	25V
	C7302	1-162-919-11	CERAMIC CHIP	22pF 5%	50V

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

CB

	REF. NO.	PART NO.	DESCRIPTION	VALUES		
	C7303	1-162-919-11	CERAMIC CHIP	22pF	5%	50V
	C7304	1-101-003-00	CERAMIC	0.0047µF		50V
	C7305	1-104-570-11	CERAMIC	0.001µF	10%	2KV
	C7306	1-126-768-11	ELECT	2200µF	20%	16V
	C7307	1-164-156-11	CERAMIC CHIP	0.1µF		25V
	C7308	1-107-662-11	ELECT	22µF	20%	250V
	C7309	1-101-003-00	CERAMIC	0.0047µF		50V
	C7310	1-164-156-11	CERAMIC CHIP	0.1µF		25V
	C7311	1-164-156-11	CERAMIC CHIP	0.1µF		25V
	C7312	1-126-933-11	ELECT	100µF	20%	16V
	C7313	1-164-156-11	CERAMIC CHIP	0.1µF		25V
	C7314	1-164-156-11	CERAMIC CHIP	0.1µF		25V
	C7315	1-161-830-00	CERAMIC	0.0047µF		500V
	C7316	1-101-003-00	CERAMIC	0.0047µF		50V
	C7317	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V
		CONNECTOR				
*	CN7302	1-564-509-11	PLUG,CONNECTOR	6P		
*	CN7303	1-564-510-11	PLUG,CONNECTOR	7P		
*	CN7304	1-564-510-11	PLUG,CONNECTOR	7P		
	CN7305	1-785-879-11	CONNECTOR, ONE TOUCH			
	CN7307	1-695-915-11	TAB (CONTACT)			
	CN7308	1-695-915-11	TAB (CONTACT)			
⚠	CN7309	1-251-182-11	SOCKET, CRT			
		DIODE				
	D7301	8-719-404-50	DIODE MA111-TX			
	D7302	8-719-404-50	DIODE MA111-TX			
	D7303	8-719-901-83	DIODE 1SS83TD			
	D7304	8-719-901-83	DIODE 1SS83TD			
		IC				
	IC7301	8-759-680-01	IC TDA6120Q/N2/S1			
		COIL				
	L7301	1-469-555-21	INDUCTOR	10µH		
	L7302	1-414-855-31	INDUCTOR	1µH		
	L7303	1-414-855-31	INDUCTOR	1µH		
		TRANSISTOR				
	Q7301	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX			
	Q7302	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX			
	Q7303	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
	Q7304	8-729-048-50	TRANSISTOR 2SK3018-T106			
		RESISTOR				
	R7301	1-249-393-11	CARBON	10	5%	1/4W
	R7302	1-216-822-11	METAL CHIP	1.2K	5%	1/10W
	R7303	1-216-813-11	METAL CHIP	220	5%	1/10W
	R7304	1-260-132-11	CARBON	560K	5%	1/2W
	R7305	1-216-801-11	METAL CHIP	22	5%	1/10W
	R7306	1-218-699-11	METAL CHIP	2K	0.50%	1/16W
	R7307	1-219-743-11	METAL	100	5%	1/2W
	R7308	1-216-809-11	METAL CHIP	100	5%	1/10W
	R7309	1-216-864-11	SHORT CHIP	0		
	R7310	1-218-710-11	METAL CHIP	5.6K	0.50%	1/16W
	R7311	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
	R7312	1-260-133-11	CARBON	680K	5%	1/2W
	R7313	1-216-818-11	METAL CHIP	560	5%	1/10W
	R7314	1-218-680-11	METAL CHIP	330	0.50%	1/16W
	R7315	1-218-690-11	METAL CHIP	820	0.50%	1/16W
	R7316	1-218-693-11	METAL CHIP	1.1K	0.50%	1/16W
	R7317	1-218-696-11	METAL CHIP	1.5K	0.50%	1/16W
	R7318	1-218-704-11	METAL CHIP	3.3K	0.50%	1/16W
	R7319	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
	R7320	1-218-749-11	METAL CHIP	240K	0.50%	1/16W
	R7321	1-218-749-11	METAL CHIP	240K	0.50%	1/16W
	R7322	1-215-925-11	METAL OXIDE	22K	5%	3W
	R7323	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
	R7324	1-260-328-11	CARBON	1K	5%	1/2W
	R7325	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
	R7326	1-260-320-11	CARBON	220	5%	1/2W
	R7328	1-249-425-11	CARBON	4.7K	5%	1/4W
	R7329	1-260-087-11	CARBON	100	5%	1/2W
		SPARK GAP				
	SG7301	1-519-422-11	GAP, SPARK			
	SG7302	1-517-729-31	GAP, SPARK			
	SG7303	1-519-421-11	GAP, DISCHARGE			

UD

UD

The UD board is not field repairable. If service is required, use the following part number to order a complete replacement board. Data is provided for reference only.

REF. NO.	PART NO.	DESCRIPTION	VALUES		
*	A-1300-324-A	UD BOARD, COMPLETE			
	CAPACITOR				
C7001	1-126-395-11	ELECT CHIP	22µF	20%	16V
C7002	1-162-917-11	CERAMIC CHIP	15pF	5%	50V
C7004	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C7005	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C7006	1-124-779-00	ELECT CHIP	10µF	20%	16V
C7007	1-162-917-11	CERAMIC CHIP	15pF	5%	50V
C7008	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C7010	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C7011	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C7012	1-124-779-00	ELECT CHIP	10µF	20%	16V
C7013	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C7014	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C7015	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C7016	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C7017	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7018	1-162-923-11	CERAMIC CHIP	47pF	5%	50V
C7019	1-162-923-11	CERAMIC CHIP	47pF	5%	50V
C7020	1-162-923-11	CERAMIC CHIP	47pF	5%	50V
C7021	1-124-779-00	ELECT CHIP	10µF	20%	16V
C7022	1-115-416-11	CERAMIC CHIP	0.001µF	5%	25V
C7023	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C7024	1-124-779-00	ELECT CHIP	10µF	20%	16V
C7025	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7026	1-124-779-00	ELECT CHIP	10µF	20%	16V
C7027	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7028	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7029	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7030	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C7031	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C7032	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C7033	1-124-779-00	ELECT CHIP	10µF	20%	16V
C7034	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7035	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7036	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7037	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7038	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7039	1-126-395-11	ELECT CHIP	22µF	20%	16V
C7040	1-162-921-11	CERAMIC CHIP	33pF	5%	50V
C7041	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7042	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7043	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7044	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7045	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7046	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7047	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7048	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7049	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7050	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7051	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7052	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7053	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7056	1-126-395-11	ELECT CHIP	22µF	20%	16V
C7057	1-162-921-11	CERAMIC CHIP	33pF	5%	50V
C7058	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7059	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7060	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7061	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7062	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7064	1-126-395-11	ELECT CHIP	22µF	20%	16V
C7065	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C7066	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C7067	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C7068	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C7069	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C7070	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7071	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7078	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7079	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7080	1-164-156-11	CERAMIC CHIP	0.1µF		25V
	CONNECTOR				
* CN7001	1-816-228-21	CONNECTOR, DIV			
* CN7002	1-564-526-11	PLUG,CONNECTOR	11P		
* CN7004	1-564-519-11	PLUG,CONNECTOR	4P		
	DIODE				
D7001	8-719-914-43	DIODE DAN202K-T-146			
D7002	8-719-069-55	DIODE UDZSTE-175.6B			
D7003	8-719-069-55	DIODE UDZSTE-175.6B			

UD

REF. NO.	PART NO.	DESCRIPTION	VALUES		
D7004	8-719-069-55	DIODE UDZSTE-175.6B			
D7006	8-719-069-55	DIODE UDZSTE-175.6B			
	FERRITE BEAD				
FB7001	1-414-760-21	FERRITE	0µH		
FB7002	1-414-760-21	FERRITE	0µH		
FB7003	1-414-760-21	FERRITE	0µH		
FB7004	1-414-760-21	FERRITE	0µH		
	FILTER				
FL7001	1-400-087-21	FILTER, EMI REMOVAL (SMD)			
FL7002	1-234-560-21	FILTER, LOW PASS			
FL7003	1-234-559-21	FILTER, LOW PASS			
FL7004	1-234-559-21	FILTER, LOW PASS			
	IC				
IC7001	8-759-640-39	IC BR24C02F-WE2			
IC7002	8-749-015-18	IC PQ07VZ012ZP			
IC7003	8-749-015-18	IC PQ07VZ012ZP			
IC7004	6-702-080-01	IC GM7030-H			
IC7005	6-802-346-01	IC ST72631K4M1/NNLTR			
IC7006	8-759-641-86	IC BR24C16F-E2			
IC7007	6-702-170-01	IC PACDN006S			
IC7008	6-702-170-01	IC PACDN006S			
IC7009	6-702-170-01	IC PACDN006S			
	COIL				
L7001	1-412-058-11	INDUCTOR	10µH		
L7002	1-412-058-11	INDUCTOR	10µH		
	RESISTOR				
R7003	1-216-821-11	METAL CHIP	1K	5%	1/10W
R7004	1-218-852-11	METAL CHIP	1.6K	5%	1/10W
R7007	1-216-821-11	METAL CHIP	1K	5%	1/10W
R7012	1-216-821-11	METAL CHIP	1K	5%	1/10W
R7013	1-216-821-11	METAL CHIP	1K	5%	1/10W
R7014	1-216-821-11	METAL CHIP	1K	5%	1/10W
R7015	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7016	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7020	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7021	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7023	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7024	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7025	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7026	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7029	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R7030	1-216-864-11	SHORT CHIP	0		
R7032	1-218-676-11	METAL CHIP	220	0.50%	1/16W
R7034	1-218-676-11	METAL CHIP	220	0.50%	1/16W
R7036	1-218-704-11	METAL CHIP	3.3K	0.50%	1/16W
R7037	1-218-676-11	METAL CHIP	220	0.50%	1/16W
R7041	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7043	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R7044	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R7045	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7047	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7051	1-216-864-11	SHORT CHIP	0		
R7053	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7054	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7056	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7057	1-216-864-11	SHORT CHIP	0		
R7058	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7059	1-216-864-11	SHORT CHIP	0		
R7060	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7061	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7062	1-216-864-11	SHORT CHIP	0		
R7065	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7066	1-218-694-11	METAL CHIP	1.2K	0.50%	1/16W
R7067	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7068	1-216-801-11	METAL CHIP	22	5%	1/10W
R7069	1-216-801-11	METAL CHIP	22	5%	1/10W
R7071	1-216-803-11	METAL CHIP	33	5%	1/10W
R7072	1-216-803-11	METAL CHIP	33	5%	1/10W
R7075	1-218-676-11	METAL CHIP	220	0.50%	1/16W
R7080	1-218-704-11	METAL CHIP	3.3K	0.50%	1/16W
R7087	1-218-680-11	METAL CHIP	330	0.50%	1/16W
R7096	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7097	1-216-809-11	METAL CHIP	100	5%	1/10W
R7098	1-216-809-11	METAL CHIP	100	5%	1/10W
R7099	1-216-809-11	METAL CHIP	100	5%	1/10W
R7101	1-216-864-11	SHORT CHIP	0		
R7106	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7108	1-216-805-11	METAL CHIP	47	5%	1/10W
R7109	1-216-805-11	METAL CHIP	47	5%	1/10W
R7111	1-216-864-11	SHORT CHIP	0		

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

UD D

REF. NO.	PART NO.	DESCRIPTION	VALUES		
R7112	1-216-864-11	SHORT CHIP	0		
R7113	1-216-864-11	SHORT CHIP	0		
R7114	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R7115	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R7116	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R7117	1-218-668-11	METAL CHIP	100	0.50%	1/16W
R7119	1-218-668-11	METAL CHIP	100	0.50%	1/16W
R7121	1-216-864-11	SHORT CHIP	0		
R7123	1-218-704-11	METAL CHIP	3.3K	0.50%	1/16W
R7124	1-218-680-11	METAL CHIP	330	0.50%	1/16W
R7125	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R7126	1-216-864-11	SHORT CHIP	0		
	CRYSTAL				
X7001	1-795-568-21	VIBRATOR, CRYSTAL			
X7002	1-795-567-21	VIBRATOR, CRYSTAL			

D

⚠ *	A-1300-417-A	D BOARD, COMPLETE	
	4-382-854-11	SCREW (M3X10), P, SW (+)	
*	7-322-065-48	RUBBER, SILICONE RTV (KE-3490)	
	7-682-952-09	SCREW, 3X16	

The high-voltage leads associated with the FBT on the D board are not included and must be ordered separately. Order the following leads when requesting this D board:

⚠	1-779-095-51	HV LEAD ASSY
⚠	1-900-260-40	CONNECTOR ASSY., MV

CAPACITOR

C8001	1-137-372-11	MYLAR	0.022µF	5%	50V
C8002	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C8003	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C8004	1-104-666-11	ELECT	220µF	20%	25V
C8005	1-126-942-61	ELECT	1000µF	20%	25V
C8006	1-126-942-61	ELECT	1000µF	20%	25V
C8007	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C8008	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C8009	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C8010	1-136-177-00	FILM	1µF	5%	50V
C8011	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C8012	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C8013	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C8014	1-104-665-11	ELECT	100µF	20%	25V
C8015	1-126-969-11	ELECT	220µF	20%	50V
C8016	1-104-665-11	ELECT	100µF	20%	25V
C8017	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C8018	1-126-964-11	ELECT	10µF	20%	50V
C8023	1-106-220-00	MYLAR	0.1µF	10%	100V
C8024	1-137-372-11	MYLAR	0.022µF	5%	50V
C8025	1-126-968-11	ELECT	100µF	20%	50V
C8026	1-126-968-11	ELECT	100µF	20%	50V
C8028	1-126-968-11	ELECT	100µF	20%	50V
C8029	1-126-968-11	ELECT	100µF	20%	50V
C8031	1-107-636-11	ELECT	10µF	20%	160V
C8032	1-126-968-11	ELECT	100µF	20%	50V
C8033	1-126-968-11	ELECT	100µF	20%	50V
C8036	1-126-968-11	ELECT	100µF	20%	50V
C8037	1-126-968-11	ELECT	100µF	20%	50V
C8040	1-115-349-51	CERAMIC	0.01µF		2KV
C8045	1-126-965-91	ELECT	22µF	20%	50V
C8046	1-126-965-91	ELECT	22µF	20%	50V
C8047	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C8048	1-126-965-91	ELECT	22µF	20%	50V
C8049	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C8050	1-126-965-91	ELECT	22µF	20%	50V
C8051	1-102-038-00	CERAMIC	0.001µF		500V
C8052	1-126-965-91	ELECT	22µF	20%	50V
C8053	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C8054	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C8055	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C8056	1-107-652-11	ELECT	10µF	20%	250V
C8057	1-126-959-11	ELECT	0.47µF	20%	50V
C8058	1-164-230-11	CERAMIC CHIP	220pF	5%	50V
C8059	1-127-715-91	CERAMIC CHIP	0.22µF	10%	16V
C8060	1-104-665-11	ELECT	100µF	20%	25V
C8061	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C8062	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C8063	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C8064	1-107-636-11	ELECT	10µF	20%	160V
C8065	1-106-383-00	MYLAR	0.047µF	10%	200V
C8066	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C8067	1-104-665-11	ELECT	100µF	20%	25V
C8068	1-102-038-00	CERAMIC	0.001µF		500V
C8069	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C8070	1-126-964-11	ELECT	10µF	20%	50V
C8071	1-126-964-11	ELECT	10µF	20%	50V
C8072	1-126-964-11	ELECT	10µF	20%	50V

D

REF. NO.	PART NO.	DESCRIPTION	VALUES		
C8073	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C8074	1-104-665-11	ELECT	100µF	20%	25V
C8075	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C8076	1-128-551-11	ELECT	22µF	20%	25V
C8077	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C8078	1-115-416-11	CERAMIC CHIP	0.001µF	5%	25V
C8079	1-126-964-11	ELECT	10µF	20%	50V
C8080	1-126-964-11	ELECT	10µF	20%	50V
C8081	1-115-416-11	CERAMIC CHIP	0.001µF	5%	25V
C8082	1-165-176-11	CERAMIC CHIP	0.047µF	10%	16V
C8083	1-130-495-00	MYLAR	0.1µF	5%	50V
C8084	1-130-992-11	FILM	0.022µF	5%	50V
C8085	1-162-924-11	CERAMIC CHIP	56pF	5%	50V
C8086	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C8087	1-126-960-11	ELECT	1µF	20%	50V
C8088	1-126-964-11	ELECT	10µF	20%	50V
C8089	1-107-444-11	CERAMIC	100pF	10%	2KV
C8090	1-126-960-11	ELECT	1µF	20%	50V
C8091	1-104-665-11	ELECT	100µF	20%	25V
C8092	1-117-640-11	FILM	6800pF	3%	1.2KV
C8093	1-107-648-91	ELECT	100µF	20%	160V
C8094	1-126-947-11	ELECT	47µF	20%	25V
C8095	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C8096	1-136-684-51	MYLAR	0.0022µF	10%	100V
C8097	1-162-131-11	CERAMIC	220pF	10%	2KV
C8098	1-162-131-11	CERAMIC	220pF	10%	2KV
C8099	1-115-416-11	CERAMIC CHIP	0.001µF	5%	25V
C8100	1-104-665-11	ELECT	100µF	20%	25V
C8102	1-102-038-00	CERAMIC	0.001µF		500V
C8103	1-126-964-11	ELECT	10µF	20%	50V
C8104	1-162-965-11	CERAMIC CHIP	0.0015µF	10%	50V
C8105	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C8106	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C8107	1-136-187-11	MYLAR	0.047µF	10%	250V
C8108	1-126-964-11	ELECT	10µF	20%	50V
C8109	1-162-924-11	CERAMIC CHIP	56pF	5%	50V
C8110	1-126-960-11	ELECT	1µF	20%	50V
C8111	1-126-960-11	ELECT	1µF	20%	50V
C8112	1-164-315-11	CERAMIC CHIP	470pF	5%	50V
C8113	1-130-495-00	MYLAR	0.1µF	5%	50V
C8114	1-125-473-11	ELECT(BLOCK)	1000µF	20%	160V
C8115	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C8116	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C8117	1-102-038-00	CERAMIC	0.001µF		500V
C8118	1-136-189-00	MYLAR	0.1µF	10%	250V
C8119	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C8120	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C8121	1-115-349-51	CERAMIC	0.01µF		2KV
C8122	1-126-934-11	ELECT	220µF	20%	16V
C8123	1-107-444-11	CERAMIC	100pF	10%	2KV
C8124	1-117-642-11	FILM	8200pF	3%	1.2KV
C8125	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C8126	1-106-357-00	MYLAR	0.0039µF	20%	200V
C8127	1-126-942-61	ELECT	1000µF	20%	25V
C8129	1-137-150-11	MYLAR	0.01µF	5%	50V
C8131	1-128-582-11	ELECT	10µF	20%	100V
C8132	1-126-927-11	ELECT	2200µF	20%	10V
C8133	1-107-649-11	ELECT	2.2µF	20%	250V
C8135	1-117-813-11	FILM	0.75µF	5%	250V
C8136	1-130-495-00	MYLAR	0.1µF	5%	50V
C8137	1-126-927-11	ELECT	2200µF	20%	10V
C8138	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C8139	1-126-964-11	ELECT	10µF	20%	50V
C8142	1-117-664-11	FILM	0.27µF	5%	250V
C8143	1-126-960-11	ELECT	1µF	20%	50V
C8148	1-104-665-11	ELECT	100µF	20%	25V
C8150	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C8153	1-126-960-11	ELECT	1µF	20%	50V

CONNECTOR

*	CN8002	1-779-890-11	CONNECTOR, BOARD TO BOARD	10P
*	CN8003	1-691-135-11	PIN,CONNECTOR (PC BOARD)	4P
*	CN8004	1-779-890-11	CONNECTOR, BOARD TO BOARD	10P
*	CN8005	1-779-890-11	CONNECTOR, BOARD TO BOARD	10P
*	CN8006	1-779-890-11	CONNECTOR, BOARD TO BOARD	10P
*	CN8007	1-564-506-11	PLUG,CONNECTOR	3P
*	CN8008	1-564-506-11	PLUG,CONNECTOR	3P
*	CN8009	1-564-506-11	PLUG,CONNECTOR	3P
*	CN8010	1-564-507-11	PLUG,CONNECTOR	4P
*	CN8011	1-564-507-11	PLUG,CONNECTOR	4P
*	CN8012	1-564-507-11	PLUG,CONNECTOR	4P
*	CN8013	1-766-177-11	PIN,CONNECTOR (PC BOARD)	9P
*	CN8015	1-506-371-00	PIN,CONNECTOR	2P
*	CN8016	1-564-507-11	PLUG,CONNECTOR	4P
*	CN8018	1-580-689-11	PIN,CONNECTOR (PC BOARD)	4P
*	CN8019	1-580-689-11	PIN,CONNECTOR (PC BOARD)	4P
*	CN8020	1-580-689-11	PIN,CONNECTOR (PC BOARD)	4P
*	CN8021	1-506-371-00	PIN,CONNECTOR	2P

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	REF. NO.	PART NO.	DESCRIPTION	VALUES
*	CN8022	1-564-510-11	PLUG,CONNECTOR	7P
*	CN8023	1-564-507-11	PLUG,CONNECTOR	4P
		DIODE		
	D8001	8-719-109-88	DIODE RD5.6ES-T1B	
	D8002	8-719-110-53	DIODE RD20ES-T1B	
	D8003	8-719-110-56	DIODE RD22ES-T1B	
	D8004	8-719-908-03	DIODE GP08DPKG23	
	D8005	8-719-991-33	DIODE 1SS133T-77	
	D8006	8-719-991-33	DIODE 1SS133T-77	
	D8007	8-719-991-33	DIODE 1SS133T-77	
	D8008	8-719-991-33	DIODE 1SS133T-77	
	D8009	8-719-991-33	DIODE 1SS133T-77	
	D8010	8-719-991-33	DIODE 1SS133T-77	
	D8011	8-719-991-33	DIODE 1SS133T-77	
	D8012	8-719-991-33	DIODE 1SS133T-77	
	D8013	8-719-109-84	DIODE RD5.1ES-T1B	
	D8014	8-719-109-84	DIODE RD5.1ES-T1B	
	D8015	8-719-991-33	DIODE 1SS133T-77	
	D8016	8-719-991-33	DIODE 1SS133T-77	
	D8019	8-719-991-33	DIODE 1SS133T-77	
	D8020	8-719-991-33	DIODE 1SS133T-77	
	D8021	8-719-061-21	DIODE PG124S15	
	D8022	8-719-991-33	DIODE 1SS133T-77	
	D8023	8-719-991-33	DIODE 1SS133T-77	
	D8024	8-719-110-39	DIODE RD15ES-T1B	
	D8025	8-719-991-33	DIODE 1SS133T-77	
	D8026	8-719-109-88	DIODE RD5.6ES-T1B	
	D8027	8-719-028-45	DIODE D2L20U-TA	
	D8028	8-719-110-39	DIODE RD15ES-T1B	
	D8029	8-719-028-45	DIODE D2L20U-F	
	D8030	8-719-028-45	DIODE D2L20U-F	
	D8031	8-719-110-47	DIODE RD18ES-T1B	
	D8032	8-719-302-43	DIODE RGP10GPKG23	
	D8033	8-719-028-72	DIODE RGP02-17PKG23	
	D8034	6-500-004-01	DIODE ERD07-15L	
	D8035	6-500-004-01	DIODE ERD07-15L	
	D8036	8-719-110-39	DIODE RD15ES-T1B	
	D8037	8-719-028-45	DIODE D2L20U-F	
	D8038	8-719-302-43	DIODE RGP10GPKG23	
	D8039	8-719-028-72	DIODE RGP02-17PKG23	
	D8043	8-719-991-33	DIODE 1SS133T-77	
	D8045	8-719-908-03	DIODE GP08DPKG23	
	D8046	8-719-991-33	DIODE 1SS133T-77	
	D8047	8-719-991-33	DIODE 1SS133T-77	

REF. NO.	PART NO.	DESCRIPTION	VALUES
	FERRITE BEAD		
FB8001	1-410-397-21	FERRITE	1.1µH
FB8002	1-410-397-21	FERRITE	1.1µH
FB8003	1-216-864-11	SHORT CHIP	0
FB8004	1-216-864-11	SHORT CHIP	0
FB8005	1-469-869-21	FERRITE	0µH
FB8006	1-469-869-21	FERRITE	0µH
FB8008	1-410-396-41	FERRITE	0.45µH
FB8009	1-410-396-41	FERRITE	0.45µH
FB8010	1-410-396-41	FERRITE	0.45µH
FB8011	1-410-396-41	FERRITE	0.45µH
FB8014	1-469-869-21	FERRITE	0µH
FB8015	1-469-869-21	FERRITE	0µH
FB8016	1-469-869-21	FERRITE	0µH
FB8017	1-469-869-21	FERRITE	0µH
FB8018	1-469-869-21	FERRITE	0µH
FB8019	1-410-397-21	FERRITE	1.1µH
FB8020	1-414-229-11	FERRITE	0µH
FB8021	1-410-397-21	FERRITE	1.1µH
FB8022	1-410-396-41	FERRITE	0.45µH
FB8023	1-410-396-41	FERRITE	0.45µH
FB8024	1-469-869-21	FERRITE	0µH
	IC		
IC8001	8-749-019-08	IC STK392-560	
IC8002	8-749-019-08	IC STK392-560	
IC8003	8-759-593-33	IC LA78045	
IC8004	8-759-647-17	IC UPC2912HF	
IC8005	8-759-585-82	IC BA9759F-E2	
IC8006	8-759-700-07	IC NJM2903M-TE2	
IC8007	8-759-700-07	IC NJM2903M-TE2	
IC8008	8-759-585-82	IC BA9759F-E2	
IC8009	8-759-803-42	IC LA6500P-FA	
IC8012	8-759-701-01	IC NJM2904M(TE2)	
	COIL		
L8001	1-412-533-21	INDUCTOR	47µH
L8002	1-412-533-21	INDUCTOR	47µH
L8003	1-412-525-31	INDUCTOR	10µH
L8004	1-412-533-21	INDUCTOR	47µH
L8005	1-412-533-21	INDUCTOR	47µH
L8006	1-412-525-31	INDUCTOR	10µH
L8007	1-412-533-21	INDUCTOR	47µH
L8008	1-412-533-21	INDUCTOR	47µH
L8009	1-412-525-31	INDUCTOR	10µH

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

D

REF. NO.	PART NO.	DESCRIPTION	VALUES
L8010	1-414-187-11	INDUCTOR	47µH
L8011	1-412-525-31	INDUCTOR	10µH
L8012	1-414-187-11	INDUCTOR	47µH
L8013	1-414-856-11	INDUCTOR	10µH
L8014	1-414-189-31	INDUCTOR	100µH
L8015	1-414-189-31	INDUCTOR	100µH
L8016	1-412-537-31	INDUCTOR	100µH
L8017	1-414-856-11	INDUCTOR	10µH
L8018	1-406-663-21	INDUCTOR	47µH
L8019	1-419-352-11	COIL, HORIZONTAL LINEARITY	
L8020	1-412-525-31	INDUCTOR	10µH
L8021	1-406-659-11	INDUCTOR	10µH
L8022	1-412-552-11	INDUCTOR	2.2MH
L8023	1-414-856-11	INDUCTOR	10µH
L8024	1-414-856-11	INDUCTOR	10µH
L8025	1-414-856-11	INDUCTOR	10µH
L8026	1-414-856-11	INDUCTOR	10µH
	NEON LAMP		
NL8001	1-517-778-21	LAMP, NEON	
	IC LINK		
⚠ PS8001	1-533-595-31	LINK, IC	
⚠ PS8002	1-533-595-31	LINK, IC	
⚠ PS8003	1-533-595-31	LINK, IC	
⚠ PS8004	1-533-595-31	LINK, IC	
⚠ PS8005	1-533-595-31	LINK, IC	
⚠ PS8006	1-533-595-31	LINK, IC	
⚠ PS8007	1-533-595-31	LINK, IC	
	TRANSISTOR		
Q8001	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	
Q8002	8-729-046-80	TRANSISTOR 2SC4634LS-CB11	
Q8003	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR	
Q8004	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR	
Q8005	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR	
Q8007	8-729-046-80	TRANSISTOR 2SC4634LS-CB11	
Q8008	8-729-207-89	TRANSISTOR 2SA1358-Y	
Q8009	8-729-207-82	TRANSISTOR 2SC3421-Y	
Q8010	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	
Q8011	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR	
Q8014	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	
Q8015	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	
Q8016	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	
Q8019	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR	
Q8020	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	
Q8021	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	
Q8022	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	
Q8023	8-729-048-47	TRANSISTOR 2SC2688(5)-LK	
Q8024	8-729-056-50	TRANSISTOR 2SC5681-YB	
Q8027	8-729-050-13	TRANSISTOR 2SJ585LS-CC11	
Q8028	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	
Q8029	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	
Q8030	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR	
Q8031	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	
Q8032	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	
Q8035	8-729-050-13	TRANSISTOR 2SJ585LS-CC11	
Q8036	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR	
Q8037	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	
Q8038	8-729-038-10	TRANSISTOR 1MB12-140-F153A	
Q8039	8-729-048-47	TRANSISTOR 2SC2688(5)-LK	
Q8101	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR	
	RESISTOR		
R8001	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R8002	1-216-809-11	METAL CHIP	100 5% 1/10W
R8003	1-216-809-11	METAL CHIP	100 5% 1/10W
R8004	1-216-809-11	METAL CHIP	100 5% 1/10W
R8005	1-215-875-11	METAL OXIDE	10K 5% 1W
R8007	1-216-809-11	METAL CHIP	100 5% 1/10W
R8008	1-216-809-11	METAL CHIP	100 5% 1/10W
R8009	1-216-809-11	METAL CHIP	100 5% 1/10W
R8010	1-260-131-11	CARBON	470K 5% 1/2W
R8011	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
R8012	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
R8013	1-218-710-11	METAL CHIP	5.6K 0.50% 1/16W
R8014	1-218-709-11	METAL CHIP	5.1K 0.50% 1/16W
R8015	1-216-837-11	METAL CHIP	22K 5% 1/10W
R8016	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
R8017	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
R8018	1-216-821-11	METAL CHIP	1K 5% 1/10W
R8019	1-218-712-11	METAL CHIP	6.8K 0.50% 1/16W
R8020	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
R8021	1-216-833-11	METAL CHIP	10K 5% 1/10W
R8022	1-216-839-11	METAL CHIP	33K 5% 1/10W
R8023	1-216-833-11	METAL CHIP	10K 5% 1/10W
R8024	1-216-833-11	METAL CHIP	10K 5% 1/10W

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REF. NO.	PART NO.	DESCRIPTION	VALUES		
R8025	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R8026	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R8029	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R8030	1-215-903-11	METAL OXIDE	68K	5%	2W
R8031	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R8032	1-216-821-11	METAL CHIP	1K	5%	1/10W
R8033	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8034	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8035	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R8036	1-214-800-11	METAL	2.2	1%	1/2W
R8037	1-215-903-11	METAL OXIDE	68K	5%	2W
R8038	1-216-809-11	METAL CHIP	100	5%	1/10W
R8039	1-214-800-11	METAL	2.2	1%	1/2W
R8040	1-215-913-11	METAL OXIDE	220	5%	3W
R8041	1-218-709-11	METAL CHIP	5.1K	0.50%	1/16W
R8042	1-216-826-11	METAL CHIP	2.7K	5%	1/10W
R8043	1-218-740-11	METAL CHIP	100K	0.50%	1/16W
R8044	1-218-712-11	METAL CHIP	6.8K	0.50%	1/16W
R8045	1-214-808-11	METAL	4.7	1%	1/2W
R8046	1-214-808-11	METAL	4.7	1%	1/2W
R8047	1-215-857-71	METAL OXIDE	10	5%	1W
R8048	1-414-189-31	INDUCTOR	100µH		
R8049	1-414-189-31	INDUCTOR	100µH		
R8050	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8051	1-214-808-11	METAL	4.7	1%	1/2W
R8053	1-214-808-11	METAL	4.7	1%	1/2W
R8055	1-218-748-11	METAL CHIP	220K	0.50%	1/16W
R8056	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R8057	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R8058	1-216-809-11	METAL CHIP	100	5%	1/10W
R8059	1-214-808-11	METAL	4.7	1%	1/2W
R8060	1-214-808-11	METAL	4.7	1%	1/2W
R8061	1-216-390-11	METAL OXIDE	1.2	5%	3W
R8062	1-260-107-11	CARBON	4.7K	5%	1/2W
R8063	1-214-808-11	METAL	4.7	1%	1/2W
R8064	1-214-808-11	METAL	4.7	1%	1/2W
R8065	1-260-328-11	CARBON	1K	5%	1/2W
R8066	1-214-808-11	METAL	4.7	1%	1/2W
R8067	1-214-808-11	METAL	4.7	1%	1/2W
R8068	1-216-809-11	METAL CHIP	100	5%	1/10W
R8069	1-214-808-11	METAL	4.7	1%	1/2W
R8070	1-214-808-11	METAL	4.7	1%	1/2W
R8071	1-215-381-00	METAL	22	1%	1/4W
R8073	1-214-808-11	METAL	4.7	1%	1/2W

REF. NO.	PART NO.	DESCRIPTION	VALUES		
R8075	1-214-808-11	METAL	4.7	1%	1/2W
R8076	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R8077	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R8078	1-214-808-11	METAL	4.7	1%	1/2W
R8079	1-214-808-11	METAL	4.7	1%	1/2W
R8080	1-216-353-00	METAL OXIDE	2.2	5%	1W
R8081	1-214-808-11	METAL	4.7	1%	1/2W
R8082	1-214-808-11	METAL	4.7	1%	1/2W
R8083	1-216-821-11	METAL CHIP	1K	5%	1/10W
R8084	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8085	1-214-808-11	METAL	4.7	1%	1/2W
R8086	1-214-808-11	METAL	4.7	1%	1/2W
R8087	1-249-385-11	CARBON	2.2	5%	1/4W
R8088	1-249-385-11	CARBON	2.2	5%	1/4W
R8089	1-214-808-11	METAL	4.7	1%	1/2W
R8090	1-214-808-11	METAL	4.7	1%	1/2W
R8091	1-214-808-11	METAL	4.7	1%	1/2W
R8092	1-214-808-11	METAL	4.7	1%	1/2W
R8093	1-214-808-11	METAL	4.7	1%	1/2W
R8094	1-214-808-11	METAL	4.7	1%	1/2W
R8095	1-216-801-11	METAL CHIP	22	5%	1/10W
R8096	1-216-801-11	METAL CHIP	22	5%	1/10W
R8097	1-214-808-11	METAL	4.7	1%	1/2W
R8098	1-214-808-11	METAL	4.7	1%	1/2W
R8099	1-218-740-11	METAL CHIP	100K	0.50%	1/16W
R8100	1-216-475-11	METAL OXIDE	120	5%	3W
R8101	1-216-475-11	METAL OXIDE	120	5%	3W
R8102	1-218-738-11	METAL CHIP	82K	0.50%	1/16W
R8103	1-216-816-11	METAL CHIP	390	5%	1/10W
R8104	1-216-832-11	METAL CHIP	8.2K	5%	1/10W
R8105	1-214-808-11	METAL	4.7	1%	1/2W
R8106	1-214-808-11	METAL	4.7	1%	1/2W
R8107	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8108	1-216-821-11	METAL CHIP	1K	5%	1/10W
R8109	1-216-814-11	METAL CHIP	270	5%	1/10W
R8110	1-249-427-11	CARBON	6.8K	5%	1/4W
R8111	1-216-819-11	METAL CHIP	680	5%	1/10W
R8112	1-216-824-11	METAL CHIP	1.8K	5%	1/10W
R8113	1-216-475-11	METAL OXIDE	120	5%	3W
R8114	1-216-475-11	METAL OXIDE	120	5%	3W
R8115	1-216-475-11	METAL OXIDE	120	5%	3W
R8116	1-216-475-11	METAL OXIDE	120	5%	3W
R8117	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8118	1-216-833-11	METAL CHIP	10K	5%	1/10W

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REF. NO.	PART NO.	DESCRIPTION	VALUES		
R8119	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8120	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8121	1-216-809-11	METAL CHIP	100	5%	1/10W
R8123	1-216-821-11	METAL CHIP	1K	5%	1/10W
R8124	1-249-377-11	CARBON	0.47	5%	1/4W
R8125	1-216-816-11	METAL CHIP	390	5%	1/10W
R8126	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R8128	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8129	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R8130	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R8131	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8132	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8133	1-216-486-00	METAL OXIDE	8.2K	5%	3W
R8134	1-215-873-00	METAL OXIDE	4.7K	5%	1W
R8135	1-216-486-00	METAL OXIDE	8.2K	5%	3W
R8136	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8137	1-218-740-11	METAL CHIP	100K	0.50%	1/16W
R8138	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8139	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R8140	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8141	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R8142	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8143	1-218-734-11	METAL CHIP	56K	0.50%	1/16W
R8144	1-216-809-11	METAL CHIP	100	5%	1/10W
R8145	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R8146	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R8147	1-218-710-11	METAL CHIP	5.6K	0.50%	1/16W
R8148	1-218-740-11	METAL CHIP	100K	0.50%	1/16W
R8149	1-215-905-11	METAL OXIDE	10	5%	3W
R8150	1-218-740-11	METAL CHIP	100K	0.50%	1/16W
R8151	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R8152	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R8153	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R8154	1-218-728-11	METAL CHIP	33K	0.50%	1/16W
R8155	1-215-469-00	METAL	100K	1%	1/4W
R8156	1-215-469-00	METAL	100K	1%	1/4W
R8157	1-218-738-11	METAL CHIP	82K	0.50%	1/16W
R8159	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8160	1-249-393-11	CARBON	10	5%	1/4W
R8161	1-216-841-11	METAL CHIP	47K	5%	1/10W
R8163	1-216-841-11	METAL CHIP	47K	5%	1/10W
R8164	1-218-734-11	METAL CHIP	56K	0.50%	1/16W
R8165	1-249-425-11	CARBON	4.7K	5%	1/4W
R8166	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R8167	1-414-189-31	INDUCTOR	100µH		
R8168	1-216-809-11	METAL CHIP	100	5%	1/10W
R8169	1-216-841-11	METAL CHIP	47K	5%	1/10W
R8170	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R8171	1-216-809-11	METAL CHIP	100	5%	1/10W
R8172	1-249-405-11	CARBON	100	5%	1/4W
R8173	1-216-841-11	METAL CHIP	47K	5%	1/10W
R8174	1-249-425-11	CARBON	4.7K	5%	1/4W
R8176	1-218-740-11	METAL CHIP	100K	0.50%	1/16W
R8178	1-216-841-11	METAL CHIP	47K	5%	1/10W
R8179	1-414-189-31	INDUCTOR	100µH		
R8180	1-216-841-11	METAL CHIP	47K	5%	1/10W
R8181	1-216-841-11	METAL CHIP	47K	5%	1/10W
R8182	1-218-748-11	METAL CHIP	220K	0.50%	1/16W
R8183	1-218-748-11	METAL CHIP	220K	0.50%	1/16W
R8184	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8187	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8189	1-249-377-11	CARBON	0.47	5%	1/4W
R8190	1-215-431-00	METAL	2.7K	1%	1/4W
R8191	1-215-429-00	METAL	2.2K	1%	1/4W
R8192	1-215-449-00	METAL	15K	1%	1/4W
R8193	1-215-449-00	METAL	15K	1%	1/4W
R8194	1-215-449-00	METAL	15K	1%	1/4W
R8195	1-215-449-00	METAL	15K	1%	1/4W
R8196	1-249-425-11	CARBON	4.7K	5%	1/4W
R8197	1-216-809-11	METAL CHIP	100	5%	1/10W
R8198	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8201	1-249-397-11	CARBON	22	5%	1/4W
R8202	1-260-092-11	CARBON	270	5%	1/2W
R8203	1-249-377-11	CARBON	0.47	5%	1/4W
R8205	1-249-377-11	CARBON	0.47	5%	1/4W
R8206	1-249-377-11	CARBON	0.47	5%	1/4W
R8208	1-260-288-11	CARBON	0.47	5%	1/2W
R8209	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8210	1-216-809-11	METAL CHIP	100	5%	1/10W
R8211	1-215-906-11	METAL OXIDE	15	5%	3W
R8212	1-215-907-11	METAL OXIDE	22	5%	3W
R8213	1-216-821-11	METAL CHIP	1K	5%	1/10W
R8216	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8217	1-216-821-11	METAL CHIP	1K	5%	1/10W
R8218	1-260-123-11	CARBON	100K	5%	1/2W
R8219	1-249-377-11	CARBON	0.47	5%	1/4W
R8220	1-216-821-11	METAL CHIP	1K	5%	1/10W
R8223	1-218-748-11	METAL CHIP	220K	0.50%	1/16W

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

A component identified by this ⋈ symbol indicates that it has been carefully factory-selected to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

D A

REF. NO.	PART NO.	DESCRIPTION	VALUES		
R8224	1-260-127-11	CARBON	220K	5%	1/2W
R8225	1-260-292-11	CARBON	1	5%	1/2W
R8228	1-260-314-11	CARBON	68	5%	1/2W
R8230	1-218-751-11	METAL CHIP	300K	0.50%	1/16W
R8232	1-216-341-11	METAL OXIDE	0.22	5%	1W
	TRANSFORMER				
T8001	1-435-142-11	TRANSFORMER, FERRITE (DFT)			
T8002	1-437-400-11	TRANSFORMER, FERRITE (HDT)			
T8003	1-437-401-11	TRANSFORMER, FERRITE (HOT)			
⚠ T8004	1-437-399-21	TRANSFORMER, FERRITE (LOT)			
⚠ T8005	1-453-285-41	FBT ASSY, NX-4006			
	THERMISTOR				
TH8001	1-800-193-00	THERMISTOR			
	VARIABLE RESISTOR				
⚠ ⋈ VR8001	1-225-627-91	RES, VAR, ADJ, CERMET	2K		
⚠ ⋈ VR8002	1-225-630-91	RES, VAR, ADJ, CERMET	20K		

A

*	**A-1300-550-A**	**A BOARD, COMPLETE**			
	4-382-854-11	SCREW (M3X10), P, SW (+)			
*	7-651-000-50	GREASE,SILICON (G-746) 200G			
	CAPACITOR				
C1	1-126-933-11	ELECT	100µF	20%	16V
C2	1-104-665-11	ELECT	100µF	20%	25V
C3	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C4	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C5	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C6	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7	1-126-933-11	ELECT	100µF	20%	16V
C8	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9	1-115-416-11	CERAMIC CHIP	0.001µF	5%	25V
C10	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C11	1-126-933-11	ELECT	100µF	20%	16V
C12	1-126-933-11	ELECT	100µF	20%	16V
C13	1-164-392-11	CERAMIC CHIP	390pF	5%	50V
C14	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C15	1-164-392-11	CERAMIC CHIP	390pF	5%	50V
C16	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C17	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C18	1-162-975-11	CERAMIC CHIP	24pF	5%	50V
C19	1-162-975-11	CERAMIC CHIP	24pF	5%	50V
C20	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C21	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C22	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C23	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C24	1-126-947-11	ELECT	47µF	20%	16V
C26	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C27	1-126-947-11	ELECT	47µF	20%	16V
C28	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C29	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C30	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C31	1-126-947-11	ELECT	47µF	20%	16V
C33	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C34	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C35	1-126-947-11	ELECT	47µF	20%	16V
C36	1-126-934-11	ELECT	220µF	20%	10V
C37	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C38	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C39	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C40	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C41	1-126-934-11	ELECT	220µF	20%	10V
C42	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C43	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C44	1-126-947-11	ELECT	47µF	20%	16V
C45	1-162-968-11	CERAMIC CHIP	0.0047µF	10%	50V
C46	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C47	1-162-968-11	CERAMIC CHIP	0.0047µF	10%	50V
C49	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C50	1-162-917-11	CERAMIC CHIP	15pF	5%	50V
C51	1-126-947-11	ELECT	47µF	20%	16V
C52	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C53	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C54	1-162-968-11	CERAMIC CHIP	0.0047µF	10%	50V
C55	1-162-968-11	CERAMIC CHIP	0.0047µF	10%	50V
C56	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C57	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C59	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C60	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C61	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C62	1-126-947-11	ELECT	47µF	20%	16V
C63	1-126-935-11	ELECT	470µF	20%	6.3V
C65	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C66	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C67	1-164-156-11	CERAMIC CHIP	0.1µF		25V

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REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES		
C68	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C123	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V
C69	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C124	1-164-346-11	CERAMIC CHIP	1µF		16V
C70	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C125	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C73	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C128	1-162-960-11	CERAMIC CHIP	220pF	10%	50V
C74	1-126-964-11	ELECT	10µF	20%	50V	C129	1-165-176-11	CERAMIC CHIP	0.047µF	10%	16V
C75	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C130	1-162-970-11	CERAMIC CHIP	0.01µF	10%	16V
C76	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V	C131	1-126-961-11	ELECT	2.2µF	20%	50V
C77	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C132	1-126-935-11	ELECT	470µF	20%	16V
C78	1-104-665-11	ELECT	100µF	20%	25V	C133	1-126-964-11	ELECT	10µF	20%	50V
C79	1-126-933-11	ELECT	100µF	20%	16V	C134	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C80	1-126-967-11	ELECT	47µF	20%	50V	C135	1-126-964-11	ELECT	10µF	20%	50V
C81	1-104-665-11	ELECT	100µF	20%	10V	C136	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C82	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C137	1-126-964-11	ELECT	10µF	20%	50V
C83	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C138	1-126-964-11	ELECT	10µF	20%	50V
C84	1-126-933-11	ELECT	100µF	20%	16V	C139	1-126-964-11	ELECT	10µF	20%	50V
C85	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C140	1-126-933-11	ELECT	100µF	20%	16V
C86	1-162-970-11	CERAMIC CHIP	0.01µF	10%	16V	C141	1-126-933-11	ELECT	100µF	20%	16V
C87	1-126-960-11	ELECT	1µF	20%	50V	C142	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C88	1-126-933-11	ELECT	100µF	20%	16V	C143	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C90	1-126-964-11	ELECT	10µF	20%	50V	C144	1-126-964-11	ELECT	10µF	20%	50V
C92	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C145	1-162-970-11	CERAMIC CHIP	0.01µF	10%	16V
C93	1-126-964-11	ELECT	10µF	20%	50V	C148	1-104-665-11	ELECT	100µF	20%	25V
C94	1-164-346-11	CERAMIC CHIP	1µF		16V	C149	1-126-933-11	ELECT	100µF	20%	16V
C95	1-162-970-11	CERAMIC CHIP	0.01µF	10%	16V	C150	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C96	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C151	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C97	1-164-315-11	CERAMIC CHIP	470pF	5%	50V	C301	1-162-970-11	CERAMIC CHIP	0.01µF	10%	16V
C98	1-126-960-11	ELECT	1µF	20%	50V	C302	1-125-837-91	CERAMIC CHIP	1µF	10%	6.3V
C99	1-165-176-11	CERAMIC CHIP	0.047µF	10%	16V	C303	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C101	1-162-960-11	CERAMIC CHIP	220pF	10%	50V	C304	1-164-315-11	CERAMIC CHIP	470pF	5%	50V
C102	1-126-964-11	ELECT	10µF	20%	50V	C305	1-162-917-11	CERAMIC CHIP	15pF	5%	50V
C103	1-126-964-11	ELECT	10µF	20%	50V	C306	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C104	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C307	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C105	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C308	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C106	1-126-933-11	ELECT	100µF	20%	16V	C309	1-126-933-11	ELECT	100µF	20%	16V
C108	1-162-917-11	CERAMIC CHIP	15pF	5%	50V	C310	1-126-964-11	ELECT	10µF	20%	50V
C109	1-162-917-11	CERAMIC CHIP	15pF	5%	50V	C311	1-126-933-11	ELECT	100µF	20%	16V
C110	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C312	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C111	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C313	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C112	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C314	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C113	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C315	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C115	1-162-917-11	CERAMIC CHIP	15pF	5%	50V	C316	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C116	1-162-917-11	CERAMIC CHIP	15pF	5%	50V	C317	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C119	1-126-933-11	ELECT	100µF	20%	16V	C318	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C120	1-126-933-11	ELECT	100µF	20%	16V	C319	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V

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REF. NO.	PART NO.	DESCRIPTION	VALUES		
C320	1-126-963-11	ELECT	4.7µF	20%	50V
C321	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C322	1-126-933-11	ELECT	100µF	20%	16V
C323	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C324	1-125-837-91	CERAMIC CHIP	1µF	10%	6.3V
C325	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C326	1-164-315-11	CERAMIC CHIP	470pF	5%	50V
C327	1-162-917-11	CERAMIC CHIP	15pF	5%	50V
C328	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C329	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C330	1-162-970-11	CERAMIC CHIP	0.01µF	10%	16V
C331	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C332	1-126-964-11	ELECT	10µF	20%	50V
C333	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C334	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C335	1-126-933-11	ELECT	100µF	20%	16V
C336	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C337	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C338	1-126-963-11	ELECT	4.7µF	20%	50V
C339	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C340	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C341	1-162-968-11	CERAMIC CHIP	0.0047µF	10%	50V
C342	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C343	1-126-963-11	ELECT	4.7µF	20%	50V
C344	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C345	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C346	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C347	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C348	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C349	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C350	1-126-935-11	ELECT	470µF	20%	16V
C351	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C352	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C353	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C354	1-126-963-11	ELECT	4.7µF	20%	50V
C355	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C356	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C357	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C358	1-162-917-11	CERAMIC CHIP	15pF	5%	50V
C359	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C360	1-162-917-11	CERAMIC CHIP	15pF	5%	50V
C361	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C362	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C363	1-126-933-11	ELECT	100µF	20%	16V

REF. NO.	PART NO.	DESCRIPTION	VALUES		
C364	1-126-933-11	ELECT	100µF	20%	16V
C365	1-126-933-11	ELECT	100µF	20%	16V
C366	1-125-837-91	CERAMIC CHIP	1µF	10%	6.3V
C367	1-125-837-91	CERAMIC CHIP	1µF	10%	6.3V
C368	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C369	1-126-933-11	ELECT	100µF	20%	16V
C370	1-126-933-11	ELECT	100µF	20%	16V
C371	1-126-933-11	ELECT	100µF	20%	16V
C372	1-126-933-11	ELECT	100µF	20%	16V
C373	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C374	1-126-933-11	ELECT	100µF	20%	16V
C375	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C376	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C377	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C378	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C379	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C380	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C381	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C382	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C383	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C384	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C385	1-162-968-11	CERAMIC CHIP	0.0047µF	10%	50V
C386	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C387	1-126-964-11	ELECT	10µF	20%	50V
C388	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C389	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C390	1-126-964-11	ELECT	10µF	20%	50V
C391	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C392	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C393	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C394	1-126-933-11	ELECT	100µF	20%	16V
C395	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C396	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C397	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C398	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C399	1-162-917-11	CERAMIC CHIP	15pF	5%	50V
C400	1-126-933-11	ELECT	100µF	20%	16V
C401	1-162-917-11	CERAMIC CHIP	15pF	5%	50V
C402	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C403	1-126-947-11	ELECT	47µF	20%	16V
C404	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C405	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C406	1-127-760-11	CERAMIC CHIP	4.7µF	10%	6.3V
C407	1-127-760-11	CERAMIC CHIP	4.7µF	10%	6.3V

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REF. NO.	PART NO.	DESCRIPTION	VALUES		
C408	1-127-760-11	CERAMIC CHIP	4.7µF	10%	6.3V
C410	1-126-934-11	ELECT	220µF	20%	10V
C411	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C412	1-125-837-91	CERAMIC CHIP	1µF	10%	6.3V
C413	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C414	1-162-970-11	CERAMIC CHIP	0.01µF	10%	16V
C415	1-125-837-91	CERAMIC CHIP	1µF	10%	6.3V
C416	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C417	1-126-933-11	ELECT	100µF	20%	16V
C418	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C419	1-126-933-11	ELECT	100µF	20%	16V
C420	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C421	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C422	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C423	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C426	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C427	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C430	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C431	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C435	1-126-933-11	ELECT	100µF	20%	16V
C438	1-126-933-11	ELECT	100µF	20%	16V
C439	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C440	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C442	1-135-834-91	CERAMIC CHIP	2.2µF		6.3V
C443	1-126-933-11	ELECT	100µF	20%	16V
C444	1-110-563-11	CERAMIC CHIP	0.068µF	10%	16V
C449	1-125-837-91	CERAMIC CHIP	1µF	10%	6.3V
C455	1-130-495-00	MYLAR	0.1µF	5%	50V
C457	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C458	1-136-244-11	FILM	0.1µF	5%	50V
C460	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C461	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C463	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C464	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C466	1-162-923-11	CERAMIC CHIP	47pF	5%	50V
C467	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C468	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C470	1-162-970-11	CERAMIC CHIP	0.01µF	10%	16V
C472	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C476	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C477	1-127-760-11	CERAMIC CHIP	4.7µF	10%	6.3V
C478	1-216-864-11	SHORT CHIP	0		
C479	1-162-923-11	CERAMIC CHIP	47pF	5%	50V
C480	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C481	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C482	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C483	1-162-968-11	CERAMIC CHIP	0.0047µF	10%	50V
C484	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C485	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C486	1-115-467-11	CERAMIC CHIP	0.22µF	10%	10V
C487	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C488	1-126-933-11	ELECT	100µF	20%	16V
C489	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C490	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C494	1-126-933-11	ELECT	100µF	20%	16V
C495	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C497	1-126-933-11	ELECT	100µF	20%	16V
C498	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C500	1-164-816-11	CERAMIC CHIP	220pF	2%	50V
C501	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C502	1-164-816-11	CERAMIC CHIP	220pF	2%	50V
C503	1-164-816-11	CERAMIC CHIP	220pF	2%	50V
C504	1-115-416-11	CERAMIC CHIP	0.001µF	5%	25V
C505	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C506	1-164-816-11	CERAMIC CHIP	220pF	2%	50V
C507	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V
C701	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C702	1-126-964-11	ELECT	10µF	20%	50V
C703	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C704	1-126-947-11	ELECT	47µF	20%	25V
C705	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C706	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C707	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C708	1-104-665-11	ELECT	100µF	20%	10V
C709	1-162-920-11	CERAMIC CHIP	27pF	5%	50V
C710	1-162-919-11	CERAMIC CHIP	22pF	5%	50V
C713	1-162-917-11	CERAMIC CHIP	15pF	5%	50V
C714	1-162-917-11	CERAMIC CHIP	15pF	5%	50V
C719	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C722	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C728	1-126-933-11	ELECT	100µF	20%	16V
C730	1-162-915-11	CERAMIC CHIP	10pF	0.50pF	50V
C731	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C732	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C733	1-115-416-11	CERAMIC CHIP	0.001µF	5%	25V
C739	1-126-963-11	ELECT	4.7µF	20%	50V
C740	1-126-963-11	ELECT	4.7µF	20%	50V
C741	1-126-963-11	ELECT	4.7µF	20%	50V

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REF. NO.	PART NO.	DESCRIPTION	VALUES		
C745	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C746	1-126-947-11	ELECT	47µF	20%	25V
C747	1-126-947-11	ELECT	47µF	20%	25V
C749	1-126-947-11	ELECT	47µF	20%	25V
C751	1-126-943-11	ELECT	2200µF	20%	25V
C752	1-126-943-11	ELECT	2200µF	20%	25V
C755	1-126-947-11	ELECT	47µF	20%	25V
C756	1-126-964-11	ELECT	10µF	20%	50V
C757	1-130-495-00	MYLAR	0.1µF	5%	50V
C758	1-126-947-11	ELECT	47µF	20%	25V
C759	1-164-227-11	CERAMIC CHIP	0.022µF	10%	25V
C761	1-164-227-11	CERAMIC CHIP	0.022µF	10%	25V
C762	1-104-665-11	ELECT	100µF	20%	25V
C764	1-130-495-00	MYLAR	0.1µF	5%	50V
C765	1-126-933-11	ELECT	100µF	20%	16V
C771	1-130-495-00	MYLAR	0.1µF	5%	50V
C772	1-130-495-00	MYLAR	0.1µF	5%	50V
C773	1-164-677-11	CERAMIC CHIP	0.033µF	10%	16V
C775	1-162-967-11	CERAMIC CHIP	0.0033µF	10%	50V
C780	1-104-665-11	ELECT	100µF	20%	25V
C782	1-130-489-00	MYLAR	0.033µF	5%	50V
C783	1-130-471-00	MYLAR	0.001µF	5%	50V
C784	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C785	1-126-963-11	ELECT	4.7µF	20%	50V
C786	1-126-963-11	ELECT	4.7µF	20%	50V
C787	1-126-960-11	ELECT	1µF	20%	50V
C788	1-165-176-11	CERAMIC CHIP	0.047µF	10%	16V
C789	1-126-964-11	ELECT	10µF	20%	50V
C790	1-164-677-11	CERAMIC CHIP	0.033µF	10%	16V
C791	1-162-967-11	CERAMIC CHIP	0.0033µF	10%	50V
C792	1-130-489-00	MYLAR	0.033µF	5%	50V
C793	1-130-471-00	MYLAR	0.001µF	5%	50V
C794	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C795	1-126-963-11	ELECT	4.7µF	20%	50V
C796	1-126-933-11	ELECT	100µF	20%	16V
C797	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C799	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C800	1-162-970-11	CERAMIC CHIP	0.01µF	10%	16V
C801	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C802	1-126-935-11	ELECT	470µF	20%	16V
C810	1-126-947-11	ELECT	47µF	20%	25V

	REF. NO.	PART NO.	DESCRIPTION	VALUES
		CONNECTOR		
*	CN1	1-779-892-11	CONNECTOR, BOARD TO BOARD	10P
*	CN2	1-779-892-11	CONNECTOR, BOARD TO BOARD	10P
*	CN3	1-779-892-11	CONNECTOR, BOARD TO BOARD	10P
*	CN4	1-564-510-11	PLUG,CONNECTOR	7P
	CN5	1-573-979-21	CONNECTOR, BOARD TO BOARD	11P
*	CN6	1-793-922-11	CONNECTOR, DIN (RECEPTACLE)	64P
*	CN7	1-564-508-11	PLUG,CONNECTOR	5P
	CN8	1-695-915-11	TAB (CONTACT)	
*	CN9	1-564-509-11	PLUG,CONNECTOR	6P
*	CN10	1-564-511-11	PLUG,CONNECTOR	8P
	CN11	1-573-298-21	CONNECTOR, BOARD TO BOARD	20P
	CN12	1-573-298-21	CONNECTOR, BOARD TO BOARD	20P
*	CN13	1-793-922-11	CONNECTOR, DIN (RECEPTACLE)	64P
*	CN14	1-779-892-11	CONNECTOR, BOARD TO BOARD	10P
	CN15	1-695-915-11	TAB (CONTACT)	
*	CN16	1-564-506-11	PLUG,CONNECTOR	3P
*	CN17	1-564-508-11	PLUG,CONNECTOR	5P
*	CN18	1-564-508-11	PLUG,CONNECTOR	5P
*	CN19	1-564-508-11	PLUG,CONNECTOR	5P
	CN21	1-695-915-11	TAB (CONTACT)	
	CN22	1-695-915-11	TAB (CONTACT)	
*	CN23	1-564-507-11	PLUG,CONNECTOR	4P
*	CN24	1-564-510-11	PLUG,CONNECTOR	7P
*	CN701	1-564-507-11	PLUG,CONNECTOR	4P
*	CN702	1-564-509-11	PLUG,CONNECTOR	6P
*	CN703	1-564-509-11	PLUG,CONNECTOR	6P
*	CN704	1-564-509-11	PLUG,CONNECTOR	6P
*	CN705	1-564-507-11	PLUG,CONNECTOR	4P
*	CN706	1-564-507-11	PLUG,CONNECTOR	4P
		DIODE		
	D1	8-719-404-50	DIODE MA111-TX	
	D5	8-719-083-87	DIODE UDZS-TE17-33B	
	D7	8-719-069-55	DIODE UDZSTE-175.6B	
	D307	8-719-978-33	DIODE UDZSTE-176.8B	
	D312	8-719-069-55	DIODE UDZSTE-175.6B	
	D317	8-719-404-50	DIODE MA111-TX	
	D318	8-719-404-50	DIODE MA111-TX	
	D319	8-719-404-50	DIODE MA111-TX	
	D321	8-719-404-50	DIODE MA111-TX	
	D701	8-719-082-05	DIODE M1MA142WKT1	

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REF. NO.	PART NO.	DESCRIPTION	VALUES
D702	8-719-404-50	DIODE MA111-TX	
D703	8-719-083-57	DIODE UDZSTE-173.6B	
D704	8-719-082-05	DIODE M1MA142WKT1	
D705	8-719-083-87	DIODE UDZS-TE17-33B	
D706	8-719-083-87	DIODE UDZS-TE17-33B	
D708	8-719-404-50	DIODE MA111-TX	
D709	8-719-404-50	DIODE MA111-TX	
D710	8-719-082-05	DIODE M1MA142WKT1	
D711	8-719-082-05	DIODE M1MA142WKT1	
D712	8-719-082-05	DIODE M1MA142WKT1	
D713	8-719-082-05	DIODE M1MA142WKT1	
D718	8-719-404-50	DIODE MA111-TX	
D719	8-719-404-50	DIODE MA111-TX	
D720	8-719-920-67	DIODE ERC91-02	
D721	8-719-920-67	DIODE ERC91-02	
D723	8-719-083-85	DIODE UDZS-TE17-22B	
D724	8-719-083-85	DIODE UDZS-TE17-22B	
D725	8-719-083-85	DIODE UDZS-TE17-22B	
D726	8-719-083-85	DIODE UDZS-TE17-22B	
D729	8-719-404-50	DIODE MA111-TX	
	FERRITE BEAD		
FB1	1-414-445-11	FERRITE	0µH
FB2	1-414-445-11	FERRITE	0µH
FB3	1-414-445-11	FERRITE	0µH
FB4	1-414-445-11	FERRITE	0µH
FB5	1-216-295-91	SHORT CHIP	0
FB6	1-414-445-11	FERRITE	0µH
FB301	1-414-760-21	FERRITE	0µH
	FILTER		
FL3	1-233-512-21	FERRITE	37µH
FL4	1-239-848-21	FILTER, LOW PASS	
FL5	1-239-848-21	FILTER, LOW PASS	
FL6	1-239-848-21	FILTER, LOW PASS	
FL7	1-239-848-21	FILTER, LOW PASS	
	IC		
IC1	8-759-647-10	IC UPC2933HF	
IC2	8-759-653-07	IC PQ09RD21	
IC3	8-759-830-08	IC NJM2068V-TE2	
IC4	8-759-684-10	IC M11B416256A-35J(T)	
IC5	8-759-100-96	IC NJM4558M-TE2	

REF. NO.	PART NO.	DESCRIPTION	VALUES
IC6	8-759-594-44	IC UPD64082GF-3BA	
IC7	8-759-100-96	IC NJM4558M-TE2	
IC8	8-759-647-10	IC UPC2933HF	
IC9	8-759-701-79	IC NJM7812FA	
IC10	8-759-100-96	IC NJM4558M-TE2	
IC11	8-759-100-96	IC NJM4558M-TE2	
IC12	6-700-898-01	IC PQ05RD21	
IC13	8-759-647-11	IC UPC2905HF	
IC301	8-752-102-21	IC CXA2103AQ	
IC302	8-752-916-40	IC CXP85840A-039Q	
IC303	8-752-102-21	IC CXA2103AQ	
IC304	8-752-916-40	IC CXP85840A-039Q	
IC305	8-759-595-97	IC SN74LV4053ANSR	
IC306	8-752-103-44	IC CXA2171Q	
IC307	8-759-595-97	IC SN74LV4053ANSR	
IC308	8-752-395-13	IC CXD2085M-T4	
IC309	8-752-100-25	IC CXA2150AQ	
IC310	8-759-349-11	IC PST9145NL	
IC311	8-759-700-07	IC NJM2903M-TE2	
IC312	8-759-082-58	IC TC7W08FU(TE12R)	
IC701	8-759-349-11	IC PST9145NL	
IC702	6-700-149-01	IC M24C04-MN6T(A)	
IC703	8-759-575-72	IC M24C08-WMN6T(A)	
IC704	6-802-317-01	IC M306V2ME-202FP	
IC707	8-759-100-96	IC NJM4558M-TE2	
IC708	8-759-190-89	IC TDA7265	
IC711	8-759-690-57	IC BH3868BFS-E2	
	COIL		
L1	1-414-181-11	INDUCTOR	4.7µH
L2	1-469-555-21	INDUCTOR	10µH
L3	1-469-555-21	INDUCTOR	10µH
L4	1-469-555-21	INDUCTOR	10µH
L5	1-414-193-41	INDUCTOR	220µH
L6	1-469-555-21	INDUCTOR	10µH
L7	1-414-856-11	INDUCTOR	10µH
L8	1-414-856-11	INDUCTOR	10µH
L9	1-414-856-11	INDUCTOR	10µH
L10	1-412-537-31	INDUCTOR	100µH
L11	1-414-856-11	INDUCTOR	10µH
L12	1-414-856-11	INDUCTOR	10µH
L13	1-414-856-11	INDUCTOR	10µH
L301	1-469-555-21	INDUCTOR	10µH
L302	1-469-555-21	INDUCTOR	10µH

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

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REF. NO.	PART NO.	DESCRIPTION	VALUES
L303	1-469-555-21	INDUCTOR	10µH
L304	1-469-555-21	INDUCTOR	10µH
L305	1-469-555-21	INDUCTOR	10µH
L306	1-414-193-41	INDUCTOR	220µH
L307	1-469-555-21	INDUCTOR	10µH
L308	1-414-856-11	INDUCTOR	10µH
L309	1-469-555-21	INDUCTOR	10µH
L310	1-469-555-21	INDUCTOR	10µH
L311	1-469-555-21	INDUCTOR	10µH
L312	1-469-555-21	INDUCTOR	10µH
L313	1-414-856-11	INDUCTOR	10µH
L314	1-469-555-21	INDUCTOR	10µH
L315	1-469-555-21	INDUCTOR	10µH
L316	1-414-856-11	INDUCTOR	10µH
L317	1-414-856-11	INDUCTOR	10µH
L318	1-469-555-21	INDUCTOR	10µH
L321	1-414-856-11	INDUCTOR	10µH
L701	1-414-179-21	INDUCTOR	2.2µH
L702	1-412-911-11	FERRITE	0µH
	IC LINK		
⚠ PS1	1-532-679-00	LINK, IC	0.6A/150V
⚠ PS2	1-532-685-00	LINK, IC	0.8A/150V
⚠ PS3	1-532-679-00	LINK, IC	0.6A/150V
⚠ PS701	1-576-336-21	LINK, IC	
⚠ PS702	1-576-336-21	LINK, IC	
	TRANSISTOR		
Q1	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q2	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q3	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q4	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q5	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q6	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q7	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q8	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q11	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q12	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q13	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q14	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q15	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q16	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q17	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q18	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q19	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q20	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q21	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q22	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q23	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q24	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q25	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q26	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q27	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q28	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q30	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q301	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q302	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q303	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q304	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q305	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q306	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q307	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q308	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q309	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q310	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q311	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q312	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q313	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q314	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q315	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q316	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q317	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q318	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q319	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q320	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q321	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q322	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q323	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q324	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q325	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q326	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q327	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q328	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q329	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q330	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q331	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q332	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	

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REF. NO.	PART NO.	DESCRIPTION	VALUES
Q333	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q334	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q335	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q336	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q337	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q338	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q339	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q340	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q341	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q342	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q343	8-729-122-63	TRANSISTOR 2SA1226-T1E4	
Q344	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q345	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q346	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q347	8-729-122-63	TRANSISTOR 2SA1226-T1E4	
Q348	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q349	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q350	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q351	8-729-122-63	TRANSISTOR 2SA1226-T1E4	
Q352	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q353	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q354	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q355	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q356	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q357	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q358	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q361	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q363	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q367	8-729-122-63	TRANSISTOR 2SA1226-T1E4	
Q368	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q369	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q373	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q374	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q378	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q379	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q380	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q381	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q501	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR	
Q502	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q701	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q702	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q703	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q704	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q705	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q706	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q707	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q708	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q709	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q710	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q712	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q713	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q714	8-729-027-38	TRANSISTOR DTA144EKA-T146	
Q715	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q716	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q717	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q718	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q721	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q722	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q723	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q725	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	

RESISTOR

R1	1-216-464-11	METAL OXIDE	18K	5%	2W
R2	1-216-813-11	METAL CHIP	220	5%	1/10W
R3	1-216-813-11	METAL CHIP	220	5%	1/10W
R4	1-216-813-11	METAL CHIP	220	5%	1/10W
R5	1-216-813-11	METAL CHIP	220	5%	1/10W
R6	1-216-813-11	METAL CHIP	220	5%	1/10W
R7	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8	1-216-813-11	METAL CHIP	220	5%	1/10W
R9	1-216-813-11	METAL CHIP	220	5%	1/10W
R10	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R11	1-218-720-11	METAL CHIP	15K	0.50%	1/16W
R12	1-218-722-11	METAL CHIP	18K	0.50%	1/16W
R13	1-218-740-11	METAL CHIP	100K	0.50%	1/16W
R14	1-216-839-11	METAL CHIP	33K	5%	1/10W
R15	1-216-821-11	METAL CHIP	1K	5%	1/10W
R16	1-218-702-11	METAL CHIP	2.7K	0.50%	1/16W
R17	1-218-706-11	METAL CHIP	3.9K	0.50%	1/16W
R18	1-218-714-11	METAL CHIP	8.2K	0.50%	1/16W
R19	1-216-817-11	METAL CHIP	470	5%	1/10W
R20	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R21	1-216-839-11	METAL CHIP	33K	5%	1/10W
R22	1-216-817-11	METAL CHIP	470	5%	1/10W
R23	1-216-809-11	METAL CHIP	100	5%	1/10W
R24	1-216-809-11	METAL CHIP	100	5%	1/10W
R25	1-216-809-11	METAL CHIP	100	5%	1/10W

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REF. NO.	PART NO.	DESCRIPTION	VALUES		
R26	1-216-809-11	METAL CHIP	100	5%	1/10W
R27	1-218-707-11	METAL CHIP	4.3K	0.50%	1/16W
R29	1-216-864-11	SHORT CHIP	0		
R30	1-216-809-11	METAL CHIP	100	5%	1/10W
R31	1-216-809-11	METAL CHIP	100	5%	1/10W
R32	1-216-864-11	SHORT CHIP	0		
R33	1-216-809-11	METAL CHIP	100	5%	1/10W
R37	1-216-853-11	METAL CHIP	470K	5%	1/10W
R39	1-216-855-11	METAL CHIP	680K	5%	1/10W
R40	1-216-809-11	METAL CHIP	100	5%	1/10W
R42	1-216-855-11	METAL CHIP	680K	5%	1/10W
R43	1-216-853-11	METAL CHIP	470K	5%	1/10W
R44	1-249-377-11	CARBON	0.47	5%	1/4W
R46	1-216-822-11	METAL CHIP	1.2K	5%	1/10W
R48	1-216-809-11	METAL CHIP	100	5%	1/10W
R49	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R50	1-216-809-11	METAL CHIP	100	5%	1/10W
R51	1-216-833-11	METAL CHIP	10K	5%	1/10W
R52	1-216-833-11	METAL CHIP	10K	5%	1/10W
R53	1-216-817-11	METAL CHIP	470	5%	1/10W
R54	1-216-817-11	METAL CHIP	470	5%	1/10W
R55	1-216-822-11	METAL CHIP	1.2K	5%	1/10W
R56	1-216-805-11	METAL CHIP	47	5%	1/10W
R57	1-216-805-11	METAL CHIP	47	5%	1/10W
R59	1-216-821-11	METAL CHIP	1K	5%	1/10W
R60	1-216-833-11	METAL CHIP	10K	5%	1/10W
R61	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R62	1-216-821-11	METAL CHIP	1K	5%	1/10W
R63	1-216-809-11	METAL CHIP	100	5%	1/10W
R64	1-216-837-11	METAL CHIP	22K	5%	1/10W
R65	1-216-833-11	METAL CHIP	10K	5%	1/10W
R66	1-216-849-11	METAL CHIP	220K	5%	1/10W
R67	1-216-841-11	METAL CHIP	47K	5%	1/10W
R68	1-216-839-11	METAL CHIP	33K	5%	1/10W
R69	1-216-857-11	METAL CHIP	1M	5%	1/10W
R70	1-216-845-11	METAL CHIP	100K	5%	1/10W
R71	1-216-813-11	METAL CHIP	220	5%	1/10W
R72	1-216-821-11	METAL CHIP	1K	5%	1/10W
R73	1-218-686-11	METAL CHIP	560	0.50%	1/16W
R74	1-218-684-11	METAL CHIP	470	0.50%	1/16W
R75	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R76	1-216-818-11	METAL CHIP	560	5%	1/10W
R77	1-216-821-11	METAL CHIP	1K	5%	1/10W
R78	1-218-686-11	METAL CHIP	560	0.50%	1/16W
R79	1-216-818-11	METAL CHIP	560	5%	1/10W
R80	1-218-686-11	METAL CHIP	560	0.50%	1/16W
R81	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R82	1-216-821-11	METAL CHIP	1K	5%	1/10W
R85	1-216-830-11	METAL CHIP	5.6K	5%	1/10W
R87	1-216-833-11	METAL CHIP	10K	5%	1/10W
R88	1-216-830-11	METAL CHIP	5.6K	5%	1/10W
R89	1-216-813-11	METAL CHIP	220	5%	1/10W
R90	1-216-864-11	SHORT CHIP	0		
R91	1-216-864-11	SHORT CHIP	0		
R92	1-216-830-11	METAL CHIP	5.6K	5%	1/10W
R93	1-216-830-11	METAL CHIP	5.6K	5%	1/10W
R95	1-216-818-11	METAL CHIP	560	5%	1/10W
R96	1-216-818-11	METAL CHIP	560	5%	1/10W
R99	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R100	1-216-833-11	METAL CHIP	10K	5%	1/10W
R102	1-216-818-11	METAL CHIP	560	5%	1/10W
R103	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R104	1-216-821-11	METAL CHIP	1K	5%	1/10W
R105	1-216-821-11	METAL CHIP	1K	5%	1/10W
R107	1-216-833-11	METAL CHIP	10K	5%	1/10W
R108	1-216-818-11	METAL CHIP	560	5%	1/10W
R109	1-216-807-11	METAL CHIP	68	5%	1/10W
R110	1-216-809-11	METAL CHIP	100	5%	1/10W
R111	1-216-809-11	METAL CHIP	100	5%	1/10W
R112	1-216-857-11	METAL CHIP	1M	5%	1/10W
R113	1-216-845-11	METAL CHIP	100K	5%	1/10W
R114	1-216-809-11	METAL CHIP	100	5%	1/10W
R115	1-216-820-11	METAL CHIP	820	5%	1/10W
R116	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R117	1-216-821-11	METAL CHIP	1K	5%	1/10W
R118	1-216-820-11	METAL CHIP	820	5%	1/10W
R119	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R120	1-216-834-11	METAL CHIP	12K	5%	1/10W
R121	1-216-839-11	METAL CHIP	33K	5%	1/10W
R122	1-216-820-11	METAL CHIP	820	5%	1/10W
R123	1-216-833-11	METAL CHIP	10K	5%	1/10W
R124	1-216-834-11	METAL CHIP	12K	5%	1/10W
R125	1-216-839-11	METAL CHIP	33K	5%	1/10W
R126	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R127	1-216-839-11	METAL CHIP	33K	5%	1/10W
R128	1-216-821-11	METAL CHIP	1K	5%	1/10W
R129	1-216-805-11	METAL CHIP	47	5%	1/10W
R130	1-216-821-11	METAL CHIP	1K	5%	1/10W

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REF. NO.	PART NO.	DESCRIPTION	VALUES		
R131	1-216-837-11	METAL CHIP	22K	5%	1/10W
R133	1-218-686-11	METAL CHIP	560	0.50%	1/16W
R134	1-218-683-11	METAL CHIP	430	0.50%	1/16W
R135	1-216-809-11	METAL CHIP	100	5%	1/10W
R136	1-216-821-11	METAL CHIP	1K	5%	1/10W
R137	1-216-833-11	METAL CHIP	10K	5%	1/10W
R138	1-216-833-11	METAL CHIP	10K	5%	1/10W
R139	1-216-841-11	METAL CHIP	47K	5%	1/10W
R140	1-216-833-11	METAL CHIP	10K	5%	1/10W
R141	1-216-809-11	METAL CHIP	100	5%	1/10W
R142	1-216-839-11	METAL CHIP	33K	5%	1/10W
R143	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R144	1-216-840-11	METAL CHIP	39K	5%	1/10W
R145	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R146	1-216-839-11	METAL CHIP	33K	5%	1/10W
R147	1-216-833-11	METAL CHIP	10K	5%	1/10W
R148	1-216-397-11	METAL OXIDE	4.7	5%	3W
R151	1-216-833-11	METAL CHIP	10K	5%	1/10W
R152	1-216-833-11	METAL CHIP	10K	5%	1/10W
R153	1-216-833-11	METAL CHIP	10K	5%	1/10W
R154	1-216-830-11	METAL CHIP	5.6K	5%	1/10W
R155	1-216-864-11	SHORT CHIP	0		
R301	1-216-809-11	METAL CHIP	100	5%	1/10W
R302	1-216-809-11	METAL CHIP	100	5%	1/10W
R303	1-216-833-11	METAL CHIP	10K	5%	1/10W
R304	1-216-833-11	METAL CHIP	10K	5%	1/10W
R305	1-216-835-11	METAL CHIP	15K	5%	1/10W
R306	1-218-696-11	METAL CHIP	1.5K	0.50%	1/16W
R307	1-218-696-11	METAL CHIP	1.5K	0.50%	1/16W
R308	1-216-821-11	METAL CHIP	1K	5%	1/10W
R309	1-216-813-11	METAL CHIP	220	5%	1/10W
R310	1-216-857-11	METAL CHIP	1M	5%	1/10W
R311	1-216-840-11	METAL CHIP	39K	5%	1/10W
R312	1-216-809-11	METAL CHIP	100	5%	1/10W
R313	1-216-833-11	METAL CHIP	10K	5%	1/10W
R314	1-216-833-11	METAL CHIP	10K	5%	1/10W
R315	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R316	1-216-821-11	METAL CHIP	1K	5%	1/10W
R317	1-216-821-11	METAL CHIP	1K	5%	1/10W
R318	1-216-833-11	METAL CHIP	10K	5%	1/10W
R319	1-216-864-11	SHORT CHIP	0		
R320	1-216-833-11	METAL CHIP	10K	5%	1/10W
R321	1-216-821-11	METAL CHIP	1K	5%	1/10W
R322	1-216-809-11	METAL CHIP	100	5%	1/10W
R323	1-216-809-11	METAL CHIP	100	5%	1/10W
R324	1-216-809-11	METAL CHIP	100	5%	1/10W
R325	1-216-835-11	METAL CHIP	15K	5%	1/10W
R326	1-216-864-11	SHORT CHIP	0		
R327	1-216-817-11	METAL CHIP	470	5%	1/10W
R329	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R330	1-216-828-11	METAL CHIP	3.9K	5%	1/10W
R331	1-216-833-11	METAL CHIP	10K	5%	1/10W
R332	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R333	1-216-809-11	METAL CHIP	100	5%	1/10W
R334	1-216-809-11	METAL CHIP	100	5%	1/10W
R335	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R336	1-216-809-11	METAL CHIP	100	5%	1/10W
R337	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R338	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R339	1-216-809-11	METAL CHIP	100	5%	1/10W
R340	1-216-828-11	METAL CHIP	3.9K	5%	1/10W
R341	1-218-706-11	METAL CHIP	3.9K	0.50%	1/16W
R342	1-216-841-11	METAL CHIP	47K	5%	1/10W
R343	1-216-809-11	METAL CHIP	100	5%	1/10W
R344	1-216-809-11	METAL CHIP	100	5%	1/10W
R345	1-218-696-11	METAL CHIP	1.5K	0.50%	1/16W
R346	1-218-696-11	METAL CHIP	1.5K	0.50%	1/16W
R347	1-216-817-11	METAL CHIP	470	5%	1/10W
R348	1-216-841-11	METAL CHIP	47K	5%	1/10W
R349	1-216-813-11	METAL CHIP	220	5%	1/10W
R350	1-216-809-11	METAL CHIP	100	5%	1/10W
R351	1-216-813-11	METAL CHIP	220	5%	1/10W
R352	1-216-813-11	METAL CHIP	220	5%	1/10W
R353	1-216-809-11	METAL CHIP	100	5%	1/10W
R354	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R355	1-216-809-11	METAL CHIP	100	5%	1/10W
R356	1-216-841-11	METAL CHIP	47K	5%	1/10W
R357	1-216-837-11	METAL CHIP	22K	5%	1/10W
R358	1-216-837-11	METAL CHIP	22K	5%	1/10W
R359	1-216-837-11	METAL CHIP	22K	5%	1/10W
R360	1-216-837-11	METAL CHIP	22K	5%	1/10W
R361	1-216-837-11	METAL CHIP	22K	5%	1/10W
R362	1-216-837-11	METAL CHIP	22K	5%	1/10W
R363	1-216-809-11	METAL CHIP	100	5%	1/10W
R364	1-216-809-11	METAL CHIP	100	5%	1/10W
R365	1-216-809-11	METAL CHIP	100	5%	1/10W
R366	1-216-841-11	METAL CHIP	47K	5%	1/10W
R367	1-216-821-11	METAL CHIP	1K	5%	1/10W

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REF. NO.	PART NO.	DESCRIPTION	VALUES		
R368	1-216-821-11	METAL CHIP	1K	5%	1/10W
R369	1-216-821-11	METAL CHIP	1K	5%	1/10W
R370	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R371	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R372	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R373	1-216-809-11	METAL CHIP	100	5%	1/10W
R374	1-216-815-11	METAL CHIP	330	5%	1/10W
R375	1-216-815-11	METAL CHIP	330	5%	1/10W
R376	1-216-815-11	METAL CHIP	330	5%	1/10W
R377	1-216-837-11	METAL CHIP	22K	5%	1/10W
R378	1-216-837-11	METAL CHIP	22K	5%	1/10W
R379	1-216-837-11	METAL CHIP	22K	5%	1/10W
R380	1-216-837-11	METAL CHIP	22K	5%	1/10W
R381	1-216-837-11	METAL CHIP	22K	5%	1/10W
R382	1-216-837-11	METAL CHIP	22K	5%	1/10W
R383	1-216-809-11	METAL CHIP	100	5%	1/10W
R384	1-216-809-11	METAL CHIP	100	5%	1/10W
R385	1-216-821-11	METAL CHIP	1K	5%	1/10W
R386	1-216-809-11	METAL CHIP	100	5%	1/10W
R387	1-216-845-11	METAL CHIP	100K	5%	1/10W
R388	1-216-837-11	METAL CHIP	22K	5%	1/10W
R389	1-216-809-11	METAL CHIP	100	5%	1/10W
R390	1-216-809-11	METAL CHIP	100	5%	1/10W
R391	1-216-809-11	METAL CHIP	100	5%	1/10W
R392	1-216-809-11	METAL CHIP	100	5%	1/10W
R393	1-216-809-11	METAL CHIP	100	5%	1/10W
R394	1-216-809-11	METAL CHIP	100	5%	1/10W
R395	1-216-821-11	METAL CHIP	1K	5%	1/10W
R396	1-216-821-11	METAL CHIP	1K	5%	1/10W
R397	1-216-821-11	METAL CHIP	1K	5%	1/10W
R398	1-216-845-11	METAL CHIP	100K	5%	1/10W
R399	1-216-833-11	METAL CHIP	10K	5%	1/10W
R400	1-216-845-11	METAL CHIP	100K	5%	1/10W
R401	1-216-845-11	METAL CHIP	100K	5%	1/10W
R402	1-216-845-11	METAL CHIP	100K	5%	1/10W
R403	1-216-845-11	METAL CHIP	100K	5%	1/10W
R404	1-216-845-11	METAL CHIP	100K	5%	1/10W
R405	1-216-845-11	METAL CHIP	100K	5%	1/10W
R406	1-216-864-11	SHORT CHIP	0		
R407	1-216-833-11	METAL CHIP	10K	5%	1/10W
R408	1-216-821-11	METAL CHIP	1K	5%	1/10W
R409	1-216-821-11	METAL CHIP	1K	5%	1/10W
R410	1-218-673-11	METAL CHIP	160	0.50%	1/16W
R411	1-218-673-11	METAL CHIP	160	0.50%	1/16W
R412	1-216-813-11	METAL CHIP	220	5%	1/10W
R413	1-218-668-11	METAL CHIP	100	0.50%	1/16W
R414	1-218-668-11	METAL CHIP	100	0.50%	1/16W
R415	1-218-668-11	METAL CHIP	100	0.50%	1/16W
R416	1-216-857-11	METAL CHIP	1M	5%	1/10W
R417	1-216-809-11	METAL CHIP	100	5%	1/10W
R418	1-216-809-11	METAL CHIP	100	5%	1/10W
R419	1-218-702-11	METAL CHIP	2.7K	0.50%	1/16W
R420	1-218-698-11	METAL CHIP	1.8K	0.50%	1/16W
R421	1-216-809-11	METAL CHIP	100	5%	1/10W
R422	1-216-809-11	METAL CHIP	100	5%	1/10W
R423	1-216-809-11	METAL CHIP	100	5%	1/10W
R424	1-218-674-11	METAL CHIP	180	0.50%	1/16W
R425	1-218-674-11	METAL CHIP	180	0.50%	1/16W
R426	1-218-674-11	METAL CHIP	180	0.50%	1/16W
R427	1-218-673-11	METAL CHIP	160	0.50%	1/16W
R428	1-216-864-11	SHORT CHIP	0		
R429	1-216-850-11	METAL CHIP	270K	5%	1/10W
R431	1-216-809-11	METAL CHIP	100	5%	1/10W
R432	1-216-817-11	METAL CHIP	470	5%	1/10W
R433	1-216-817-11	METAL CHIP	470	5%	1/10W
R434	1-216-809-11	METAL CHIP	100	5%	1/10W
R435	1-216-817-11	METAL CHIP	470	5%	1/10W
R436	1-216-809-11	METAL CHIP	100	5%	1/10W
R437	1-216-809-11	METAL CHIP	100	5%	1/10W
R438	1-216-809-11	METAL CHIP	100	5%	1/10W
R439	1-216-817-11	METAL CHIP	470	5%	1/10W
R440	1-216-813-11	METAL CHIP	220	5%	1/10W
R441	1-216-813-11	METAL CHIP	220	5%	1/10W
R442	1-216-813-11	METAL CHIP	220	5%	1/10W
R443	1-216-809-11	METAL CHIP	100	5%	1/10W
R444	1-216-809-11	METAL CHIP	100	5%	1/10W
R445	1-216-809-11	METAL CHIP	100	5%	1/10W
R446	1-216-809-11	METAL CHIP	100	5%	1/10W
R447	1-216-809-11	METAL CHIP	100	5%	1/10W
R448	1-216-809-11	METAL CHIP	100	5%	1/10W
R449	1-216-809-11	METAL CHIP	100	5%	1/10W
R450	1-216-814-11	METAL CHIP	270	5%	1/10W
R451	1-216-814-11	METAL CHIP	270	5%	1/10W
R452	1-216-814-11	METAL CHIP	270	5%	1/10W
R453	1-216-841-11	METAL CHIP	47K	5%	1/10W
R454	1-216-837-11	METAL CHIP	22K	5%	1/10W
R455	1-216-837-11	METAL CHIP	22K	5%	1/10W
R456	1-216-825-11	METAL CHIP	2.2K	5%	1/10W

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REF. NO.	PART NO.	DESCRIPTION	VALUES		
R457	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R458	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R459	1-216-815-11	METAL CHIP	330	5%	1/10W
R460	1-216-815-11	METAL CHIP	330	5%	1/10W
R461	1-216-815-11	METAL CHIP	330	5%	1/10W
R462	1-216-817-11	METAL CHIP	470	5%	1/10W
R463	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R464	1-216-809-11	METAL CHIP	100	5%	1/10W
R468	1-216-809-11	METAL CHIP	100	5%	1/10W
R469	1-216-797-11	METAL CHIP	10	5%	1/10W
R470	1-216-839-11	METAL CHIP	33K	5%	1/10W
R472	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R473	1-216-809-11	METAL CHIP	100	5%	1/10W
R476	1-216-808-11	METAL CHIP	82	5%	1/10W
R477	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R480	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R481	1-216-821-11	METAL CHIP	1K	5%	1/10W
R482	1-216-839-11	METAL CHIP	33K	5%	1/10W
R483	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R484	1-216-809-11	METAL CHIP	100	5%	1/10W
R486	1-216-809-11	METAL CHIP	100	5%	1/10W
R487	1-216-809-11	METAL CHIP	100	5%	1/10W
R489	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R490	1-216-808-11	METAL CHIP	82	5%	1/10W
R491	1-216-833-11	METAL CHIP	10K	5%	1/10W
R492	1-216-864-11	SHORT CHIP	0		
R493	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R494	1-216-833-11	METAL CHIP	10K	5%	1/10W
R495	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R496	1-216-809-11	METAL CHIP	100	5%	1/10W
R501	1-216-808-11	METAL CHIP	82	5%	1/10W
R502	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R503	1-216-833-11	METAL CHIP	10K	5%	1/10W
R504	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R505	1-216-821-11	METAL CHIP	1K	5%	1/10W
R506	1-216-837-11	METAL CHIP	22K	5%	1/10W
R507	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R508	1-216-821-11	METAL CHIP	1K	5%	1/10W
R509	1-216-837-11	METAL CHIP	22K	5%	1/10W
R510	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R512	1-216-864-11	SHORT CHIP	0		
R513	1-216-826-11	METAL CHIP	2.7K	5%	1/10W
R515	1-216-809-11	METAL CHIP	100	5%	1/10W
R516	1-216-809-11	METAL CHIP	100	5%	1/10W
R517	1-216-809-11	METAL CHIP	100	5%	1/10W
R518	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R519	1-216-821-11	METAL CHIP	1K	5%	1/10W
R521	1-216-833-11	METAL CHIP	10K	5%	1/10W
R527	1-216-864-11	SHORT CHIP	0		
R538	1-216-809-11	METAL CHIP	100	5%	1/10W
R540	1-216-809-11	METAL CHIP	100	5%	1/10W
R541	1-218-867-11	METAL CHIP	6.8K	5%	1/10W
R542	1-216-809-11	METAL CHIP	100	5%	1/10W
R543	1-216-826-11	METAL CHIP	2.7K	5%	1/10W
R544	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R550	1-216-863-11	METAL CHIP	3.3M	5%	1/10W
R551	1-216-833-11	METAL CHIP	10K	5%	1/10W
R552	1-216-809-11	METAL CHIP	100	5%	1/10W
R553	1-216-834-11	METAL CHIP	12K	5%	1/10W
R554	1-216-809-11	METAL CHIP	100	5%	1/10W
R556	1-216-808-11	METAL CHIP	82	5%	1/10W
R557	1-216-808-11	METAL CHIP	82	5%	1/10W
R558	1-216-808-11	METAL CHIP	82	5%	1/10W
R559	1-216-817-11	METAL CHIP	470	5%	1/10W
R561	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R562	1-216-817-11	METAL CHIP	470	5%	1/10W
R566	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R567	1-218-708-11	METAL CHIP	4.7K	0.50%	1/16W
R568	1-216-809-11	METAL CHIP	100	5%	1/10W
R569	1-216-809-11	METAL CHIP	100	5%	1/10W
R570	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R571	1-216-864-11	SHORT CHIP	0		
R572	1-216-835-11	METAL CHIP	15K	5%	1/10W
R574	1-216-833-11	METAL CHIP	10K	5%	1/10W
R575	1-216-833-11	METAL CHIP	10K	5%	1/10W
R576	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R577	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R593	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R594	1-216-833-11	METAL CHIP	10K	5%	1/10W
R596	1-216-841-11	METAL CHIP	47K	5%	1/10W
R597	1-216-821-11	METAL CHIP	1K	5%	1/10W
R598	1-216-833-11	METAL CHIP	10K	5%	1/10W
R599	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R602	1-216-837-11	METAL CHIP	22K	5%	1/10W
R603	1-216-833-11	METAL CHIP	10K	5%	1/10W
R604	1-216-833-11	METAL CHIP	10K	5%	1/10W
R605	1-216-833-11	METAL CHIP	10K	5%	1/10W
R606	1-216-833-11	METAL CHIP	10K	5%	1/10W

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REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES		
R607	1-216-833-11	METAL CHIP	10K	5%	1/10W	R737	1-216-833-11	METAL CHIP	10K	5%	1/10W
R608	1-216-833-11	METAL CHIP	10K	5%	1/10W	R738	1-218-708-11	METAL CHIP	4.7K	0.50%	1/16W
R609	1-216-809-11	METAL CHIP	100	5%	1/10W	R740	1-216-809-11	METAL CHIP	100	5%	1/10W
R613	1-216-833-11	METAL CHIP	10K	5%	1/10W	R742	1-216-821-11	METAL CHIP	1K	5%	1/10W
R616	1-216-833-11	METAL CHIP	10K	5%	1/10W	R743	1-216-809-11	METAL CHIP	100	5%	1/10W
R617	1-216-809-11	METAL CHIP	100	5%	1/10W	R744	1-216-821-11	METAL CHIP	1K	5%	1/10W
R618	1-216-809-11	METAL CHIP	100	5%	1/10W	R745	1-216-841-11	METAL CHIP	47K	5%	1/10W
R619	1-216-821-11	METAL CHIP	1K	5%	1/10W	R747	1-216-809-11	METAL CHIP	100	5%	1/10W
R620	1-216-801-11	METAL CHIP	22	5%	1/10W	R748	1-216-833-11	METAL CHIP	10K	5%	1/10W
R621	1-216-801-11	METAL CHIP	22	5%	1/10W	R749	1-216-849-11	METAL CHIP	220K	5%	1/10W
R622	1-216-801-11	METAL CHIP	22	5%	1/10W	R750	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R624	1-216-809-11	METAL CHIP	100	5%	1/10W	R751	1-216-821-11	METAL CHIP	1K	5%	1/10W
R628	1-249-377-11	CARBON	0.47	5%	1/4W	R752	1-216-821-11	METAL CHIP	1K	5%	1/10W
R701	1-216-817-11	METAL CHIP	470	5%	1/10W	R753	1-216-809-11	METAL CHIP	100	5%	1/10W
R702	1-216-841-11	METAL CHIP	47K	5%	1/10W	R754	1-216-809-11	METAL CHIP	100	5%	1/10W
R703	1-216-821-11	METAL CHIP	1K	5%	1/10W	R755	1-216-809-11	METAL CHIP	100	5%	1/10W
R705	1-216-809-11	METAL CHIP	100	5%	1/10W	R756	1-216-809-11	METAL CHIP	100	5%	1/10W
R706	1-216-809-11	METAL CHIP	100	5%	1/10W	R758	1-216-809-11	METAL CHIP	100	5%	1/10W
R707	1-216-809-11	METAL CHIP	100	5%	1/10W	R759	1-216-821-11	METAL CHIP	1K	5%	1/10W
R708	1-216-809-11	METAL CHIP	100	5%	1/10W	R760	1-216-849-11	METAL CHIP	220K	5%	1/10W
R709	1-216-817-11	METAL CHIP	470	5%	1/10W	R761	1-216-849-11	METAL CHIP	220K	5%	1/10W
R710	1-216-813-11	METAL CHIP	220	5%	1/10W	R762	1-216-845-11	METAL CHIP	100K	5%	1/10W
R711	1-216-833-11	METAL CHIP	10K	5%	1/10W	R763	1-216-815-11	METAL CHIP	330	5%	1/10W
R712	1-216-813-11	METAL CHIP	220	5%	1/10W	R764	1-216-821-11	METAL CHIP	1K	5%	1/10W
R713	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R765	1-216-815-11	METAL CHIP	330	5%	1/10W
R714	1-216-809-11	METAL CHIP	100	5%	1/10W	R766	1-216-821-11	METAL CHIP	1K	5%	1/10W
R715	1-216-809-11	METAL CHIP	100	5%	1/10W	R767	1-216-833-11	METAL CHIP	10K	5%	1/10W
R716	1-216-821-11	METAL CHIP	1K	5%	1/10W	R768	1-216-809-11	METAL CHIP	100	5%	1/10W
R717	1-216-827-11	METAL CHIP	3.3K	5%	1/10W	R769	1-216-809-11	METAL CHIP	100	5%	1/10W
R718	1-216-827-11	METAL CHIP	3.3K	5%	1/10W	R770	1-216-845-11	METAL CHIP	100K	5%	1/10W
R719	1-216-813-11	METAL CHIP	220	5%	1/10W	R771	1-216-809-11	METAL CHIP	100	5%	1/10W
R720	1-216-809-11	METAL CHIP	100	5%	1/10W	R772	1-216-821-11	METAL CHIP	1K	5%	1/10W
R721	1-216-823-11	METAL CHIP	1.5K	5%	1/10W	R773	1-216-809-11	METAL CHIP	100	5%	1/10W
R722	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R774	1-216-809-11	METAL CHIP	100	5%	1/10W
R723	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R775	1-216-821-11	METAL CHIP	1K	5%	1/10W
R724	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R777	1-216-821-11	METAL CHIP	1K	5%	1/10W
R725	1-216-809-11	METAL CHIP	100	5%	1/10W	R778	1-216-809-11	METAL CHIP	100	5%	1/10W
R727	1-216-809-11	METAL CHIP	100	5%	1/10W	R779	1-216-809-11	METAL CHIP	100	5%	1/10W
R728	1-216-864-11	SHORT CHIP	0			R781	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R730	1-216-809-11	METAL CHIP	100	5%	1/10W	R782	1-216-809-11	METAL CHIP	100	5%	1/10W
R732	1-216-809-11	METAL CHIP	100	5%	1/10W	R783	1-216-809-11	METAL CHIP	100	5%	1/10W
R733	1-216-821-11	METAL CHIP	1K	5%	1/10W	R784	1-216-809-11	METAL CHIP	100	5%	1/10W
R735	1-216-833-11	METAL CHIP	10K	5%	1/10W	R785	1-216-821-11	METAL CHIP	1K	5%	1/10W
R736	1-216-813-11	METAL CHIP	220	5%	1/10W	R786	1-216-821-11	METAL CHIP	1K	5%	1/10W

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REF. NO.	PART NO.	DESCRIPTION	VALUES		
R787	1-216-833-11	METAL CHIP	10K	5%	1/10W
R788	1-216-845-11	METAL CHIP	100K	5%	1/10W
R790	1-216-837-11	METAL CHIP	22K	5%	1/10W
R796	1-216-821-11	METAL CHIP	1K	5%	1/10W
R797	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R803	1-216-833-11	METAL CHIP	10K	5%	1/10W
R804	1-216-837-11	METAL CHIP	22K	5%	1/10W
R806	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R807	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R810	1-216-833-11	METAL CHIP	10K	5%	1/10W
R813	1-216-845-11	METAL CHIP	100K	5%	1/10W
R817	1-216-845-11	METAL CHIP	100K	5%	1/10W
R818	1-216-833-11	METAL CHIP	10K	5%	1/10W
R823	1-216-835-11	METAL CHIP	15K	5%	1/10W
R828	1-216-817-11	METAL CHIP	470	5%	1/10W
R829	1-216-864-11	SHORT CHIP	0		
R830	1-216-849-11	METAL CHIP	220K	5%	1/10W
R831	1-216-839-11	METAL CHIP	33K	5%	1/10W
R832	1-216-817-11	METAL CHIP	470	5%	1/10W
R833	1-216-839-11	METAL CHIP	33K	5%	1/10W
R834	1-216-805-11	METAL CHIP	47	5%	1/10W
R835	1-216-837-11	METAL CHIP	22K	5%	1/10W
R836	1-216-864-11	SHORT CHIP	0		
R840	1-216-841-11	METAL CHIP	47K	5%	1/10W
R841	1-216-839-11	METAL CHIP	33K	5%	1/10W
R842	1-216-817-11	METAL CHIP	470	5%	1/10W
R843	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R844	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R845	1-216-817-11	METAL CHIP	470	5%	1/10W
R848	1-216-836-11	METAL CHIP	18K	5%	1/10W
R849	1-216-836-11	METAL CHIP	18K	5%	1/10W
R851	1-216-833-11	METAL CHIP	10K	5%	1/10W
R854	1-216-838-11	METAL CHIP	27K	5%	1/10W
R855	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R857	1-216-838-11	METAL CHIP	27K	5%	1/10W
R858	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R860	1-249-389-11	CARBON	4.7	5%	1/4W
R861	1-249-389-11	CARBON	4.7	5%	1/4W
R862	1-216-839-11	METAL CHIP	33K	5%	1/10W
R863	1-216-841-11	METAL CHIP	47K	5%	1/10W
R864	1-216-839-11	METAL CHIP	33K	5%	1/10W
R867	1-216-837-11	METAL CHIP	22K	5%	1/10W
R868	1-216-837-11	METAL CHIP	22K	5%	1/10W
R869	1-216-834-11	METAL CHIP	12K	5%	1/10W
R870	1-216-841-11	METAL CHIP	47K	5%	1/10W
R871	1-216-809-11	METAL CHIP	100	5%	1/10W
R878	1-216-821-11	METAL CHIP	1K	5%	1/10W
R879	1-216-821-11	METAL CHIP	1K	5%	1/10W
R885	1-216-833-11	METAL CHIP	10K	5%	1/10W
R886	1-216-833-11	METAL CHIP	10K	5%	1/10W
R887	1-216-821-11	METAL CHIP	1K	5%	1/10W
R889	1-216-807-11	METAL CHIP	68	5%	1/10W
R890	1-216-807-11	METAL CHIP	68	5%	1/10W
R891	1-216-807-11	METAL CHIP	68	5%	1/10W
R892	1-216-837-11	METAL CHIP	22K	5%	1/10W
R893	1-216-857-11	METAL CHIP	1M	5%	1/10W
R895	1-216-830-11	METAL CHIP	5.6K	5%	1/10W
R896	1-216-864-11	SHORT CHIP	0		
R897	1-216-821-11	METAL CHIP	1K	5%	1/10W
R898	1-216-805-11	METAL CHIP	47	5%	1/10W
R899	1-216-821-11	METAL CHIP	1K	5%	1/10W

RESISTOR BRIDGE

RB1	1-233-576-11	RES, CHIP NETWORK	100
RB2	1-233-576-11	RES, CHIP NETWORK	100
RB3	1-233-576-11	RES, CHIP NETWORK	100
RB4	1-233-576-11	RES, CHIP NETWORK	100
RB5	1-233-576-11	RES, CHIP NETWORK	100
RB6	1-233-576-11	RES, CHIP NETWORK	100

TUNER

TU1	8-598-594-30	TUNER, FSS BTF-FA421
TU2	8-598-593-50	TUNER, FSS BTF-WA421

VARISTOR

VD1	1-804-499-21	VARISTOR, CHIP
VD2	1-804-499-21	VARISTOR, CHIP
VD3	1-804-499-21	VARISTOR, CHIP
VD4	1-804-499-21	VARISTOR, CHIP

CRYSTAL

X1	1-577-110-11	VIBRATOR, CRYSTAL
X301	1-567-505-11	OSCILLATOR, CRYSTAL
X302	1-767-179-31	VIBRATOR, CERAMIC
X303	1-567-505-11	OSCILLATOR, CRYSTAL
X304	1-767-179-31	VIBRATOR, CERAMIC
X305	1-781-282-11	VIBRATOR, CERAMIC
X306	1-767-989-11	VIBRATOR, CERAMIC
X307	1-760-895-21	VIBRATOR, CERAMIC
X701	1-579-358-21	VIBLATOR, CRYSTAL

AD

AD

The AD board is not field repairable. If service is required, use the following part number to order a complete replacement board. Data is provided for reference only.

*	**A-1299-523-A**	**AD BOARD, COMPLETE**
	4-382-854-11	SCREW (M3X10), P, SW (+)
*	7-651-000-50	GREASE,SILICON (G-746) 200G

CAPACITOR

REF. NO.	PART NO.	DESCRIPTION	VALUES		
C1601	1-126-933-11	ELECT	100µF	20%	16V
C1604	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1605	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1606	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1607	1-126-933-11	ELECT	100µF	20%	16V
C1608	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1609	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V
C1610	1-162-962-11	CERAMIC CHIP	470pF	10%	50V
C1611	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1612	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1613	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1614	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1615	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1616	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1617	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1618	1-126-933-11	ELECT	100µF	20%	16V
C1619	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1620	1-162-920-11	CERAMIC CHIP	27pF	5%	50V
C1621	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1622	1-162-917-11	CERAMIC CHIP	15pF	5%	50V
C1623	1-162-915-11	CERAMIC CHIP	10pF	0.50pF	50V
C1624	1-162-915-11	CERAMIC CHIP	10pF	0.50pF	50V
C1625	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1626	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1627	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1628	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1629	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1630	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1631	1-126-933-11	ELECT	100µF	20%	16V
C1632	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1633	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1634	1-126-963-11	ELECT	4.7µF	20%	50V
C1635	1-162-923-11	CERAMIC CHIP	47pF	5%	50V
C1636	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C1637	1-162-919-11	CERAMIC CHIP	22pF	5%	50V
C1638	1-162-919-11	CERAMIC CHIP	22pF	5%	50V
C1639	1-126-933-11	ELECT	100µF	20%	16V
C1640	1-126-933-11	ELECT	100µF	20%	16V
C1641	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1643	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1644	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1645	1-164-315-11	CERAMIC CHIP	470pF	5%	50V
C1646	1-164-315-11	CERAMIC CHIP	470pF	5%	50V
C1647	1-163-137-00	CERAMIC CHIP	680pF	5%	50V
C1649	1-163-137-00	CERAMIC CHIP	680pF	5%	50V
C1651	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1652	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1656	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1657	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1658	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1659	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1661	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1663	1-126-933-11	ELECT	100µF	20%	16V
C1664	1-126-933-11	ELECT	100µF	20%	16V
C1665	1-126-933-11	ELECT	100µF	20%	16V
C1666	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C1668	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C1669	1-162-910-11	CERAMIC CHIP	5pF	0.25pF	50V
C1670	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1671	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1672	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1673	1-162-910-11	CERAMIC CHIP	5pF	0.25pF	50V
C1674	1-164-315-11	CERAMIC CHIP	470pF	5%	50V
C1675	1-164-315-11	CERAMIC CHIP	470pF	5%	50V
C1676	1-163-137-00	CERAMIC CHIP	680pF	5%	50V
C1677	1-126-933-11	ELECT	100µF	20%	16V
C1678	1-163-137-00	CERAMIC CHIP	680pF	5%	50V
C1680	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1681	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1682	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1683	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1684	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1685	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1688	1-164-156-11	CERAMIC CHIP	0.1µF		25V

AD

REF. NO.	PART NO.	DESCRIPTION	VALUES		
C1690	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C1691	1-126-933-11	ELECT	100µF	20%	16V
C1692	1-126-933-11	ELECT	100µF	20%	16V
C1693	1-126-933-11	ELECT	100µF	20%	16V
C1694	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C1695	1-162-910-11	CERAMIC CHIP	5pF	0.25pF	50V
C1696	1-162-910-11	CERAMIC CHIP	5pF	0.25pF	50V
C1697	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1698	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1699	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1700	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1701	1-162-968-11	CERAMIC CHIP	0.0047µF	10%	50V
C1704	1-126-933-11	ELECT	100µF	20%	16V
C1707	1-164-315-11	CERAMIC CHIP	470pF	5%	50V
C1708	1-163-137-00	CERAMIC CHIP	680pF	5%	50V
C1709	1-164-315-11	CERAMIC CHIP	470pF	5%	50V
C1711	1-163-137-00	CERAMIC CHIP	680pF	5%	50V
C1712	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1714	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1715	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1717	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C1718	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1720	1-162-910-11	CERAMIC CHIP	5pF	0.25pF	50V
C1721	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C1722	1-162-910-11	CERAMIC CHIP	5pF	0.25pF	50V
C1730	1-126-916-11	ELECT	1000µF	20%	6.3V
C1731	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C1732	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C1733	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C1734	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V

CONNECTOR

CN1601	1-573-301-21	CONNECTOR, BOARD TO BOARD	20P
CN1602	1-573-301-21	CONNECTOR, BOARD TO BOARD	20P

DIODE

D1601	8-719-988-61	DIODE 1SS355TE-17
D1603	8-719-988-61	DIODE 1SS355TE-17
D1604	8-719-069-54	DIODE UDZSTE-175.1B
D1605	8-719-069-54	DIODE UDZSTE-175.1B
D1606	8-719-069-54	DIODE UDZSTE-175.1B
D1607	8-719-069-54	DIODE UDZSTE-175.1B
D1691	8-719-988-61	DIODE 1SS355TE-17
D1692	8-719-988-61	DIODE 1SS355TE-17
D1693	8-719-988-61	DIODE 1SS355TE-17

REF. NO.	PART NO.	DESCRIPTION	VALUES

FERRITE BEAD

FB1601	1-414-445-11	FERRITE	0µH
FB1602	1-414-445-11	FERRITE	0µH
FB1603	1-414-445-11	FERRITE	0µH
FB1604	1-414-445-11	FERRITE	0µH
FB1605	1-414-445-11	FERRITE	0µH
FB1606	1-414-445-11	FERRITE	0µH
FB1607	1-414-445-11	FERRITE	0µH
FB1608	1-414-445-11	FERRITE	0µH
FB1609	1-414-445-11	FERRITE	0µH
FB1610	1-414-445-11	FERRITE	0µH
FB1611	1-414-445-11	FERRITE	0µH
FB1612	1-414-445-11	FERRITE	0µH
FB1613	1-414-445-11	FERRITE	0µH
FB1614	1-414-445-11	FERRITE	0µH
FB1615	1-414-445-11	FERRITE	0µH
FB1616	1-414-445-11	FERRITE	0µH
FB1617	1-414-445-11	FERRITE	0µH

IC

IC1601	8-759-683-55	IC CM0017AF
IC1602	8-759-830-08	IC NJM2068V-TE2
IC1603	8-759-830-08	IC NJM2068V-TE2
IC1605	8-759-352-91	IC PST9143NL
IC1606	8-752-916-82	IC CXP86448-646Q
IC1607	8-759-682-41	IC M24C32-WMN6T(A)
IC1608	8-759-829-87	IC CD0031AM
IC1609	8-759-830-08	IC NJM2068V-TE2
IC1610	8-759-830-08	IC NJM2068V-TE2
IC1611	8-759-830-08	IC NJM2068V-TE2
IC1612	8-759-830-08	IC NJM2068V-TE2

COIL

L1601	1-469-555-21	INDUCTOR	10µH
L1602	1-469-555-21	INDUCTOR	10µH

TRANSISTOR

Q1603	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR
Q1604	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR
Q1605	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR
Q1606	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR

AD

RESISTOR

REF. NO.	PART NO.	DESCRIPTION	VALUES		
R1600	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1601	1-216-841-11	METAL CHIP	47K	5%	1/10W
R1604	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1605	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1606	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1607	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1608	1-216-809-11	METAL CHIP	100	5%	1/10W
R1609	1-216-809-11	METAL CHIP	100	5%	1/10W
R1611	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R1614	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R1615	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1618	1-216-809-11	METAL CHIP	100	5%	1/10W
R1619	1-216-864-11	SHORT CHIP	0		
R1620	1-216-809-11	METAL CHIP	100	5%	1/10W
R1621	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1622	1-216-817-11	METAL CHIP	470	5%	1/10W
R1623	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1625	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1627	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1634	1-216-809-11	METAL CHIP	100	5%	1/10W
R1635	1-216-809-11	METAL CHIP	100	5%	1/10W
R1636	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1637	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1638	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1639	1-216-809-11	METAL CHIP	100	5%	1/10W
R1641	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R1642	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1643	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1644	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R1645	1-216-815-11	METAL CHIP	330	5%	1/10W
R1646	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R1647	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1648	1-216-809-11	METAL CHIP	100	5%	1/10W
R1649	1-216-809-11	METAL CHIP	100	5%	1/10W
R1650	1-216-815-11	METAL CHIP	330	5%	1/10W
R1651	1-216-815-11	METAL CHIP	330	5%	1/10W
R1652	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1653	1-216-817-11	METAL CHIP	470	5%	1/10W
R1654	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R1655	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R1656	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R1657	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1658	1-216-837-11	METAL CHIP	22K	5%	1/10W
R1659	1-216-837-11	METAL CHIP	22K	5%	1/10W
R1660	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1661	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1662	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R1663	1-216-818-11	METAL CHIP	560	5%	1/10W
R1665	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R1666	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R1667	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R1668	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R1669	1-218-724-11	METAL CHIP	22K	0.50%	1/16W
R1670	1-218-724-11	METAL CHIP	22K	0.50%	1/16W
R1671	1-218-724-11	METAL CHIP	22K	0.50%	1/16W
R1672	1-218-724-11	METAL CHIP	22K	0.50%	1/16W
R1673	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R1674	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R1675	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R1676	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1681	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R1682	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R1683	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R1684	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R1685	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R1690	1-218-724-11	METAL CHIP	22K	0.50%	1/16W
R1691	1-218-724-11	METAL CHIP	22K	0.50%	1/16W
R1692	1-218-724-11	METAL CHIP	22K	0.50%	1/16W
R1693	1-218-724-11	METAL CHIP	22K	0.50%	1/16W
R1694	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R1695	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R1696	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R1697	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R1698	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R1699	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R1700	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R1701	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R1702	1-218-724-11	METAL CHIP	22K	0.50%	1/16W
R1703	1-218-724-11	METAL CHIP	22K	0.50%	1/16W
R1704	1-218-724-11	METAL CHIP	22K	0.50%	1/16W
R1705	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R1706	1-218-724-11	METAL CHIP	22K	0.50%	1/16W
R1707	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R1708	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R1709	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R1710	1-216-864-11	SHORT CHIP	0		

AD U

REF. NO.	PART NO.	DESCRIPTION	VALUES		
R1711	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1712	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1713	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1714	1-216-833-11	METAL CHIP	10K	5%	1/10W
	RESISTOR BRIDGE				
RB1603	1-233-576-11	RES, CHIP NETWORK	100		
RB1604	1-233-576-11	RES, CHIP NETWORK	100		
RB1605	1-233-576-11	RES, CHIP NETWORK	100		
	CRYSTAL				
X1601	1-767-925-21	VIBRATOR, CRYSTAL			

U

*	**A-1300-551-A**	**U BOARD, COMPLETE**			
	4-382-854-11	SCREW (M3X10), P, SW (+)			
*	7-651-000-50	GREASE,SILICON (G-746) 200G			
	CAPACITOR				
C2001	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C2002	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C2003	1-126-935-11	ELECT	470µF	20%	16V
C2004	1-128-551-11	ELECT	22µF	20%	25V
C2005	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2006	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2007	1-126-964-11	ELECT	10µF	20%	50V
C2008	1-126-964-11	ELECT	10µF	20%	50V
C2012	1-126-964-11	ELECT	10µF	20%	50V
C2013	1-126-964-11	ELECT	10µF	20%	50V
C2014	1-126-960-11	ELECT	1µF	20%	50V
C2015	1-126-960-11	ELECT	1µF	20%	50V
C2016	1-126-964-11	ELECT	10µF	20%	50V
C2017	1-126-964-11	ELECT	10µF	20%	50V
C2018	1-126-960-11	ELECT	1µF	20%	50V
C2019	1-126-964-11	ELECT	10µF	20%	50V
C2020	1-126-964-11	ELECT	10µF	20%	50V
C2021	1-126-960-11	ELECT	1µF	20%	50V
C2022	1-126-960-11	ELECT	1µF	20%	50V
C2023	1-126-964-11	ELECT	10µF	20%	50V
C2024	1-126-964-11	ELECT	10µF	20%	50V
C2025	1-126-960-11	ELECT	1µF	20%	50V
C2026	1-126-960-11	ELECT	1µF	20%	50V
C2027	1-128-551-11	ELECT	22µF	20%	25V
C2028	1-126-933-11	ELECT	100µF	20%	16V
C2029	1-126-964-11	ELECT	10µF	20%	50V
C2030	1-126-964-11	ELECT	10µF	20%	50V
C2031	1-126-964-11	ELECT	10µF	20%	50V
C2032	1-126-964-11	ELECT	10µF	20%	50V
C2033	1-126-960-11	ELECT	1µF	20%	50V
C2036	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C2037	1-165-176-11	CERAMIC CHIP	0.047µF	10%	16V
C2038	1-164-816-11	CERAMIC CHIP	220pF	2%	50V
C2040	1-126-933-11	ELECT	100µF	20%	16V
C2043	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C2044	1-126-933-11	ELECT	100µF	20%	16V
C2045	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C2046	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C2048	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C2050	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C2052	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C2055	1-126-964-11	ELECT	10µF	20%	50V
C2056	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C2060	1-126-933-11	ELECT	100µF	20%	16V
C2061	1-126-964-11	ELECT	10µF	20%	50V
C2062	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2064	1-126-964-11	ELECT	10µF	20%	50V
C2069	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C2070	1-126-964-11	ELECT	10µF	20%	50V
C2071	1-126-933-11	ELECT	100µF	20%	16V
C2072	1-126-933-11	ELECT	100µF	20%	16V
C2075	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C2076	1-126-933-11	ELECT	100µF	20%	16V
C2077	1-126-933-11	ELECT	100µF	20%	16V
C2078	1-126-933-11	ELECT	100µF	20%	16V
C2079	1-126-933-11	ELECT	100µF	20%	16V
C2080	1-126-933-11	ELECT	100µF	20%	16V
C2081	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2083	1-128-551-11	ELECT	22µF	20%	25V
C2084	1-126-964-11	ELECT	10µF	20%	50V
C2085	1-162-917-11	CERAMIC CHIP	15pF	5%	50V
C2087	1-164-160-11	CERAMIC CHIP	20pF	5%	50V
C2089	1-126-964-11	ELECT	10µF	20%	50V
C2090	1-164-227-11	CERAMIC CHIP	0.022µF	10%	25V
C2091	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2092	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2094	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C2096	1-162-917-11	CERAMIC CHIP	15pF	5%	50V

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REF. NO.	PART NO.	DESCRIPTION	VALUES		
C2097	1-162-917-11	CERAMIC CHIP	15pF	5%	50V
C2098	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2099	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2102	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2103	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2111	1-126-964-11	ELECT	10µF	20%	50V
C2112	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2113	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2114	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2122	1-126-964-11	ELECT	10µF	20%	50V
C2128	1-126-964-11	ELECT	10µF	20%	50V
C2348	1-126-947-11	ELECT	47µF	20%	25V
C2349	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C2350	1-126-964-11	ELECT	10µF	20%	50V
C2351	1-126-964-11	ELECT	10µF	20%	50V
C2352	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C2353	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C2354	1-136-287-11	MYLAR	0.0047µF	5%	50V
C2355	1-137-150-11	MYLAR	0.01µF	5%	50V
C2356	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C2357	1-126-933-11	ELECT	100µF	20%	16V
C2358	1-126-933-11	ELECT	100µF	20%	16V
C2359	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2360	1-136-287-11	MYLAR	0.0047µF	5%	50V
C2365	1-136-169-00	FILM	0.22µF	5%	50V
C2366	1-137-150-11	MYLAR	0.01µF	5%	50V
C2367	1-136-287-11	MYLAR	0.0047µF	5%	50V
C2368	1-136-169-00	FILM	0.22µF	5%	50V

CONNECTOR

* CN2001	1-793-923-11	CONNECTOR, DIN (PLUG)		64P
* CN2002	1-564-526-11	PLUG,CONNECTOR		11P

DIODE

D2001	8-719-110-17	DIODE MTZJ-T-77-10B
D2002	8-719-110-17	DIODE MTZJ-T-77-10B
D2003	8-719-110-17	DIODE MTZJ-T-77-10B
D2004	8-719-110-17	DIODE MTZJ-T-77-10B
D2005	8-719-110-17	DIODE MTZJ-T-77-10B
D2006	8-719-110-17	DIODE MTZJ-T-77-10B
D2007	8-719-110-17	DIODE MTZJ-T-77-10B
D2008	8-719-110-17	DIODE MTZJ-T-77-10B
D2009	8-719-110-17	DIODE MTZJ-T-77-10B
D2010	8-719-110-17	DIODE MTZJ-T-77-10B
D2011	8-719-110-17	DIODE MTZJ-T-77-10B
D2012	8-719-110-17	DIODE MTZJ-T-77-10B
D2013	8-719-110-17	DIODE MTZJ-T-77-10B
D2014	8-719-110-17	DIODE MTZJ-T-77-10B
D2015	8-719-110-17	DIODE MTZJ-T-77-10B
D2016	8-719-110-17	DIODE MTZJ-T-77-10B
D2017	8-719-110-17	DIODE MTZJ-T-77-10B
D2018	8-719-110-17	DIODE MTZJ-T-77-10B
D2019	8-719-110-17	DIODE MTZJ-T-77-10B
D2020	8-719-110-17	DIODE MTZJ-T-77-10B
D2021	8-719-110-17	DIODE MTZJ-T-77-10B
D2022	8-719-110-17	DIODE MTZJ-T-77-10B
D2023	8-719-110-17	DIODE MTZJ-T-77-10B
D2024	8-719-110-17	DIODE MTZJ-T-77-10B
D2025	8-719-110-17	DIODE MTZJ-T-77-10B
D2026	8-719-110-17	DIODE MTZJ-T-77-10B
D2027	8-719-110-17	DIODE MTZJ-T-77-10B
D2029	8-719-110-17	DIODE MTZJ-T-77-10B
D2030	8-719-110-17	DIODE MTZJ-T-77-10B
D2031	8-719-110-17	DIODE MTZJ-T-77-10B
D2032	8-719-110-17	DIODE MTZJ-T-77-10B
D2033	8-719-991-33	DIODE 1SS133T-77
D2034	8-719-991-33	DIODE 1SS133T-77
D2035	8-719-110-17	DIODE MTZJ-T-77-10B
D2039	8-719-110-17	DIODE MTZJ-T-77-10B
D2042	8-719-110-17	DIODE MTZJ-T-77-10B

FERRITE BEAD

FB2001	1-414-760-21	FERRITE	0µH
FB2002	1-414-445-11	FERRITE	0µH

FILTER

FL2001	1-239-848-21	FILTER, LOW PASS
FL2002	1-239-848-21	FILTER, LOW PASS
FL2003	1-239-848-21	FILTER, LOW PASS

IC

IC2001	8-759-351-01	IC TEA6422DT
IC2002	8-759-548-56	IC M52055FP
IC2003	8-759-100-96	IC NJM4558M-TE2
IC2004	8-752-080-04	IC CXA2069Q
IC2007	8-752-394-69	IC CXD2073Q-T4
IC2304	8-759-711-10	IC NJU4066BM-T2
IC2305	8-759-686-15	IC NJM2180M (TE2)

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REF. NO.	PART NO.	DESCRIPTION	VALUES
	JACK		
J2001	1-573-967-12	BLOCK, (S) TERMINAL	
J2002	1-764-143-11	JACK	
J2003	1-764-143-11	JACK	
J2004	1-750-517-21	JACK BLOCK, PIN	3P
J2005	1-815-015-11	JACK BLOCK, PIN	
J2006	1-815-015-11	JACK BLOCK, PIN	
J2007	1-750-516-21	JACK BLOCK, PIN	2P
J2008	1-750-517-21	JACK BLOCK, PIN	3P
J2009	1-750-516-21	JACK BLOCK, PIN	2P
	COIL		
L2001	1-469-559-21	INDUCTOR	47µH
L2002	1-469-555-21	INDUCTOR	10µH
	TRANSISTOR		
Q2001	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2002	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q2003	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q2004	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2005	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2006	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2007	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2008	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2009	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2010	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2012	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q2013	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2015	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2016	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2017	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2019	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q2020	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2021	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q2022	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2024	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2025	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2026	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q2027	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q2028	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q2029	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2301	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2302	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	

REF. NO.	PART NO.	DESCRIPTION	VALUES		
	RESISTOR				
R2001	1-218-285-11	METAL CHIP	75	5%	1/10W
R2002	1-216-853-11	METAL CHIP	470K	5%	1/10W
R2003	1-218-665-11	METAL CHIP	75	0.50%	1/16W
R2004	1-218-665-11	METAL CHIP	75	0.50%	1/16W
R2005	1-218-665-11	METAL CHIP	75	0.50%	1/16W
R2006	1-216-853-11	METAL CHIP	470K	5%	1/10W
R2007	1-216-853-11	METAL CHIP	470K	5%	1/10W
R2008	1-218-665-11	METAL CHIP	75	0.50%	1/16W
R2009	1-218-665-11	METAL CHIP	75	0.50%	1/16W
R2010	1-218-665-11	METAL CHIP	75	0.50%	1/16W
R2011	1-216-853-11	METAL CHIP	470K	5%	1/10W
R2012	1-216-853-11	METAL CHIP	470K	5%	1/10W
R2013	1-216-853-11	METAL CHIP	470K	5%	1/10W
R2014	1-216-853-11	METAL CHIP	470K	5%	1/10W
R2015	1-216-853-11	METAL CHIP	470K	5%	1/10W
R2016	1-216-853-11	METAL CHIP	470K	5%	1/10W
R2017	1-218-665-11	METAL CHIP	75	0.50%	1/16W
R2018	1-216-853-11	METAL CHIP	470K	5%	1/10W
R2019	1-216-853-11	METAL CHIP	470K	5%	1/10W
R2020	1-218-665-11	METAL CHIP	75	0.50%	1/16W
R2021	1-218-665-11	METAL CHIP	75	0.50%	1/16W
R2022	1-218-665-11	METAL CHIP	75	0.50%	1/16W
R2023	1-216-853-11	METAL CHIP	470K	5%	1/10W
R2024	1-216-853-11	METAL CHIP	470K	5%	1/10W
R2025	1-218-665-11	METAL CHIP	75	0.50%	1/16W
R2026	1-218-665-11	METAL CHIP	75	0.50%	1/16W
R2027	1-218-665-11	METAL CHIP	75	0.50%	1/16W
R2028	1-216-809-11	METAL CHIP	100	5%	1/10W
R2029	1-216-809-11	METAL CHIP	100	5%	1/10W
R2030	1-216-809-11	METAL CHIP	100	5%	1/10W
R2031	1-216-841-11	METAL CHIP	47K	5%	1/10W
R2032	1-216-845-11	METAL CHIP	100K	5%	1/10W
R2034	1-216-803-11	METAL CHIP	33	5%	1/10W
R2035	1-216-809-11	METAL CHIP	100	5%	1/10W
R2036	1-216-809-11	METAL CHIP	100	5%	1/10W
R2037	1-216-809-11	METAL CHIP	100	5%	1/10W
R2038	1-216-809-11	METAL CHIP	100	5%	1/10W
R2039	1-216-833-11	METAL CHIP	10K	5%	1/10W
R2040	1-216-857-11	METAL CHIP	1M	5%	1/10W
R2041	1-216-842-11	METAL CHIP	56K	5%	1/10W
R2042	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R2043	1-216-809-11	METAL CHIP	100	5%	1/10W

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REF. NO.	PART NO.	DESCRIPTION	VALUES		
R2044	1-216-853-11	METAL CHIP	470K	5%	1/10W
R2045	1-216-853-11	METAL CHIP	470K	5%	1/10W
R2046	1-216-818-11	METAL CHIP	560	5%	1/10W
R2047	1-216-809-11	METAL CHIP	100	5%	1/10W
R2048	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R2049	1-216-809-11	METAL CHIP	100	5%	1/10W
R2050	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R2051	1-216-809-11	METAL CHIP	100	5%	1/10W
R2052	1-216-817-11	METAL CHIP	470	5%	1/10W
R2053	1-216-817-11	METAL CHIP	470	5%	1/10W
R2054	1-216-809-11	METAL CHIP	100	5%	1/10W
R2055	1-216-821-11	METAL CHIP	1K	5%	1/10W
R2056	1-216-821-11	METAL CHIP	1K	5%	1/10W
R2057	1-216-809-11	METAL CHIP	100	5%	1/10W
R2058	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R2059	1-216-817-11	METAL CHIP	470	5%	1/10W
R2060	1-216-817-11	METAL CHIP	470	5%	1/10W
R2061	1-216-817-11	METAL CHIP	470	5%	1/10W
R2062	1-216-817-11	METAL CHIP	470	5%	1/10W
R2063	1-216-809-11	METAL CHIP	100	5%	1/10W
R2064	1-216-809-11	METAL CHIP	100	5%	1/10W
R2065	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R2066	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R2067	1-216-809-11	METAL CHIP	100	5%	1/10W
R2068	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R2069	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R2070	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R2071	1-216-809-11	METAL CHIP	100	5%	1/10W
R2072	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R2073	1-216-809-11	METAL CHIP	100	5%	1/10W
R2074	1-216-809-11	METAL CHIP	100	5%	1/10W
R2075	1-216-809-11	METAL CHIP	100	5%	1/10W
R2076	1-216-821-11	METAL CHIP	1K	5%	1/10W
R2077	1-216-809-11	METAL CHIP	100	5%	1/10W
R2078	1-216-864-11	SHORT CHIP	0		
R2079	1-216-821-11	METAL CHIP	1K	5%	1/10W
R2080	1-216-809-11	METAL CHIP	100	5%	1/10W
R2081	1-216-809-11	METAL CHIP	100	5%	1/10W
R2082	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R2083	1-216-864-11	SHORT CHIP	0		
R2084	1-216-809-11	METAL CHIP	100	5%	1/10W
R2085	1-216-821-11	METAL CHIP	1K	5%	1/10W
R2086	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R2087	1-216-809-11	METAL CHIP	100	5%	1/10W
R2088	1-216-864-11	SHORT CHIP	0		
R2089	1-216-809-11	METAL CHIP	100	5%	1/10W
R2090	1-216-821-11	METAL CHIP	1K	5%	1/10W
R2091	1-216-821-11	METAL CHIP	1K	5%	1/10W
R2092	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R2094	1-216-864-11	SHORT CHIP	0		
R2096	1-216-809-11	METAL CHIP	100	5%	1/10W
R2097	1-216-809-11	METAL CHIP	100	5%	1/10W
R2098	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R2099	1-216-809-11	METAL CHIP	100	5%	1/10W
R2100	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R2103	1-216-809-11	METAL CHIP	100	5%	1/10W
R2104	1-216-809-11	METAL CHIP	100	5%	1/10W
R2105	1-216-809-11	METAL CHIP	100	5%	1/10W
R2107	1-216-807-11	METAL CHIP	68	5%	1/10W
R2108	1-216-841-11	METAL CHIP	47K	5%	1/10W
R2109	1-216-809-11	METAL CHIP	100	5%	1/10W
R2110	1-216-809-11	METAL CHIP	100	5%	1/10W
R2111	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R2113	1-216-821-11	METAL CHIP	1K	5%	1/10W
R2116	1-216-832-11	METAL CHIP	8.2K	5%	1/10W
R2118	1-216-821-11	METAL CHIP	1K	5%	1/10W
R2121	1-216-809-11	METAL CHIP	100	5%	1/10W
R2122	1-216-821-11	METAL CHIP	1K	5%	1/10W
R2123	1-218-684-11	METAL CHIP	470	0.50%	1/16W
R2124	1-216-821-11	METAL CHIP	1K	5%	1/10W
R2125	1-218-702-11	METAL CHIP	2.7K	0.50%	1/16W
R2128	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R2130	1-216-809-11	METAL CHIP	100	5%	1/10W
R2131	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R2132	1-216-833-11	METAL CHIP	10K	5%	1/10W
R2133	1-218-674-11	METAL CHIP	180	0.50%	1/16W
R2136	1-216-816-11	METAL CHIP	390	5%	1/10W
R2137	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R2138	1-216-809-11	METAL CHIP	100	5%	1/10W
R2142	1-216-815-11	METAL CHIP	330	5%	1/10W
R2147	1-216-814-11	METAL CHIP	270	5%	1/10W
R2148	1-218-710-11	METAL CHIP	5.6K	0.50%	1/16W
R2149	1-216-817-11	METAL CHIP	470	5%	1/10W
R2150	1-216-821-11	METAL CHIP	1K	5%	1/10W
R2151	1-218-698-11	METAL CHIP	1.8K	0.50%	1/16W
R2152	1-218-694-11	METAL CHIP	1.2K	0.50%	1/16W
R2153	1-216-821-11	METAL CHIP	1K	5%	1/10W
R2155	1-216-837-11	METAL CHIP	22K	5%	1/10W

U B

REF. NO.	PART NO.	DESCRIPTION	VALUES		
R2156	1-216-841-11	METAL CHIP	47K	5%	1/10W
R2157	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R2159	1-216-832-11	METAL CHIP	8.2K	5%	1/10W
R2164	1-218-710-11	METAL CHIP	5.6K	0.50%	1/16W
R2166	1-216-818-11	METAL CHIP	560	5%	1/10W
R2169	1-216-842-11	METAL CHIP	56K	5%	1/10W
R2173	1-216-818-11	METAL CHIP	560	5%	1/10W
R2174	1-218-686-11	METAL CHIP	560	0.50%	1/16W
R2175	1-216-817-11	METAL CHIP	470	5%	1/10W
R2176	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R2177	1-216-809-11	METAL CHIP	100	5%	1/10W
R2178	1-218-676-11	METAL CHIP	220	0.50%	1/16W
R2182	1-216-864-11	SHORT CHIP	0		
R2183	1-216-813-11	METAL CHIP	220	5%	1/10W
R2184	1-218-704-11	METAL CHIP	3.3K	0.50%	1/16W
R2185	1-218-684-11	METAL CHIP	470	0.50%	1/16W
R2186	1-218-688-11	METAL CHIP	680	0.50%	1/16W
R2187	1-216-864-11	SHORT CHIP	0		
R2193	1-216-809-11	METAL CHIP	100	5%	1/10W
R2194	1-216-817-11	METAL CHIP	470	5%	1/10W
R2195	1-216-817-11	METAL CHIP	470	5%	1/10W
R2196	1-216-817-11	METAL CHIP	470	5%	1/10W
R2197	1-216-817-11	METAL CHIP	470	5%	1/10W
R2198	1-216-853-11	METAL CHIP	470K	5%	1/10W
R2199	1-216-853-11	METAL CHIP	470K	5%	1/10W
R2330	1-216-864-11	SHORT CHIP	0		
R2331	1-216-833-11	METAL CHIP	10K	5%	1/10W
R2332	1-216-813-11	METAL CHIP	220	5%	1/10W
R2333	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R2341	1-216-832-11	METAL CHIP	8.2K	5%	1/10W
R2342	1-218-698-11	METAL CHIP	1.8K	0.50%	1/16W
R2343	1-216-832-11	METAL CHIP	8.2K	5%	1/10W
R2344	1-218-698-11	METAL CHIP	1.8K	0.50%	1/16W
R2345	1-216-864-11	SHORT CHIP	0		
R2346	1-216-864-11	SHORT CHIP	0		
R2347	1-216-843-11	METAL CHIP	68K	5%	1/10W
R2348	1-216-838-11	METAL CHIP	27K	5%	1/10W
R2349	1-216-833-11	METAL CHIP	10K	5%	1/10W
R2350	1-216-797-11	METAL CHIP	10	5%	1/10W
R2353	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R2354	1-216-841-11	METAL CHIP	47K	5%	1/10W
R2355	1-218-890-11	METAL CHIP	62K	5%	1/10W
R2356	1-216-842-11	METAL CHIP	56K	5%	1/10W
R2357	1-216-833-11	METAL CHIP	10K	5%	1/10W
R2358	1-216-839-11	METAL CHIP	33K	5%	1/10W
R2359	1-216-824-11	METAL CHIP	1.8K	5%	1/10W
R2360	1-216-861-11	METAL CHIP	2.2M	5%	1/10W
R2363	1-216-864-11	SHORT CHIP	0		
R2365	1-216-833-11	METAL CHIP	10K	5%	1/10W
R2366	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R2369	1-216-864-11	SHORT CHIP	0		
R2375	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R2376	1-216-864-11	SHORT CHIP	0		
R2377	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R2379	1-216-842-11	METAL CHIP	56K	5%	1/10W
R2380	1-216-821-11	METAL CHIP	1K	5%	1/10W
R2381	1-218-867-11	METAL CHIP	6.8K	5%	1/10W
R2382	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R2383	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R2384	1-216-833-11	METAL CHIP	10K	5%	1/10W
R2385	1-216-835-11	METAL CHIP	15K	5%	1/10W
R2386	1-216-837-11	METAL CHIP	22K	5%	1/10W
R2387	1-216-821-11	METAL CHIP	1K	5%	1/10W
R2390	1-216-847-11	METAL CHIP	150K	5%	1/10W

B

The B board is <u>not</u> field repairable. If service is required, use the following part number to order a complete replacement board. Data is provided for reference only.

*	**A-1136-271-A**	**B BOARD, COMPLETE**
	4-382-854-11	SCREW (M3X10), P, SW (+)
*	7-651-000-50	GREASE,SILICON (G-746) 200G

<u>CAPACITOR</u>

C3001	1-128-453-21	ELECT CHIP	47µF	20%	6.3V
C3002	1-128-453-21	ELECT CHIP	47µF	20%	6.3V
C3003	1-128-453-21	ELECT CHIP	47µF	20%	6.3V
C3035	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3044	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3089	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3090	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3096	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3101	1-162-925-11	CERAMIC CHIP	68pF	5%	50V
C3102	1-162-925-11	CERAMIC CHIP	68pF	5%	50V
C3301	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3302	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3303	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C3304	1-164-156-11	CERAMIC CHIP	0.1µF		25V

B

REF. NO.	PART NO.	DESCRIPTION	VALUES		
C3305	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3306	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3307	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3308	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3309	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C3310	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3311	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3312	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C3313	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3314	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3315	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3316	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3317	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3318	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3319	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3320	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3321	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3322	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3323	1-124-779-00	ELECT CHIP	10µF	20%	16V
C3324	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3325	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3326	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3327	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3328	1-124-779-00	ELECT CHIP	10µF	20%	16V
C3329	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C3331	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3332	1-124-779-00	ELECT CHIP	10µF	20%	16V
C3333	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3334	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C3335	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3336	1-124-779-00	ELECT CHIP	10µF	20%	16V
C3337	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C3338	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3339	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3340	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3341	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3343	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3344	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3345	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3346	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3347	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3348	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3349	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3350	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3351	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3352	1-124-779-00	ELECT CHIP	10µF	20%	16V
C3353	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3354	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3355	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3356	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3357	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3358	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3359	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3360	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3361	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3362	1-127-760-11	CERAMIC CHIP	4.7µF	10%	6.3V
C3363	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3364	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3365	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3366	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3367	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3368	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3369	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3370	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3371	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3372	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3373	1-162-915-11	CERAMIC CHIP	10pF	0.50pF	50V
C3374	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3375	1-127-760-11	CERAMIC CHIP	4.7µF	10%	6.3V
C3376	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3377	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3378	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3379	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3401	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3402	1-124-779-00	ELECT CHIP	10µF	20%	16V
C3403	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3404	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C3405	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C3406	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C3407	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C3408	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C3409	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3410	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3411	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3412	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3413	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3414	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3415	1-124-779-00	ELECT CHIP	10µF	20%	16V

B

REF. NO.	PART NO.	DESCRIPTION	VALUES		
C3416	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3417	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3418	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C3419	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3420	1-124-779-00	ELECT CHIP	10µF	20%	16V
C3421	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3422	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3423	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3424	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3425	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C3426	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3428	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C3429	1-124-779-00	ELECT CHIP	10µF	20%	16V
C3430	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3431	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3432	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3433	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3434	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3435	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3436	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C3437	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3438	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3439	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3440	1-162-916-11	CERAMIC CHIP	12pF	5%	50V
C3441	1-162-916-11	CERAMIC CHIP	12pF	5%	50V
C3442	1-124-779-00	ELECT CHIP	10µF	20%	16V
C3443	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3444	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3445	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3446	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C3447	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3448	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3449	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3450	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3451	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3452	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3453	1-124-779-00	ELECT CHIP	10µF	20%	16V
C3454	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3455	1-124-779-00	ELECT CHIP	10µF	20%	16V
C3456	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3457	1-124-779-00	ELECT CHIP	10µF	20%	16V
C3458	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3460	1-162-923-11	CERAMIC CHIP	47pF	5%	50V
C3462	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3463	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3464	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3465	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3466	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3467	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3468	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C3469	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3470	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C3473	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3474	1-124-779-00	ELECT CHIP	10µF	20%	16V
C3475	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3476	1-124-779-00	ELECT CHIP	10µF	20%	16V
C3477	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3478	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3479	1-124-779-00	ELECT CHIP	10µF	20%	16V
C3480	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3481	1-117-681-11	ELECT CHIP	100µF	20%	16V
C3482	1-117-681-11	ELECT CHIP	100µF	20%	16V
C3483	1-117-681-11	ELECT CHIP	100µF	20%	16V
C3484	1-125-837-91	CERAMIC CHIP	1µF	10%	6.3V
C3485	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3486	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3487	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3488	1-124-779-00	ELECT CHIP	10µF	20%	16V
C3489	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3490	1-124-779-00	ELECT CHIP	10µF	20%	16V
C3491	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3492	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3493	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3494	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3495	1-124-779-00	ELECT CHIP	10µF	20%	16V
C3496	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3499	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V

CONNECTOR

*	CN3203	1-793-923-11	CONNECTOR, DIN (PLUG)	64P

DIODE

D3089	8-719-062-51	DIODE 1PS226-115
D3090	8-719-062-51	DIODE 1PS226-115
D3099	8-719-988-61	DIODE 1SS355TE-17
D3301	8-719-083-58	DIODE UDZSTE-173.9B
D3302	8-719-069-60	DIODE UDZSTE-179.1B

B

REF. NO.	PART NO.	DESCRIPTION	VALUES
D3401	8-719-914-43	DIODE DAN202K-T-146	
D3402	8-719-914-44	DIODE DAP202K-T-146	
D3403	8-719-978-33	DIODE UDZSTE-176.8B	
	FERRITE BEAD		
FB3302	1-500-451-11	FERRITE	0µH
FB3303	1-469-110-21	FERRITE	0µH
FB3401	1-414-235-22	FERRITE	0µH
FB3402	1-414-235-22	FERRITE	0µH
	FILTER		
FL3003	1-781-924-11	FILTER, LOW PASS (SMD)	
FL3301	1-234-558-21	FILTER, LOW PASS	
FL3302	1-234-557-21	FILTER, LOW PASS	
FL3303	1-234-557-21	FILTER, LOW PASS	
FL3401	1-781-923-11	FILTER, LOW PASS (SMD)	
	IC		
IC3089	6-700-149-01	IC M24C04-MN6T(A)	
IC3090	8-759-832-08	IC MB94918RpF-G-134-BND	
IC3091	8-759-349-11	IC PST9145NL	
IC3301	8-759-663-74	IC HY57V161610DTC-7TR	
IC3302	8-759-832-05	IC BA18BC0FP-E2	
IC3303	8-752-409-78	IC CXD2095AQ	
IC3304	8-759-447-90	IC TLC5733AIPM	
IC3305	8-759-669-75	IC TLC2932IPWR	
IC3306	8-759-669-78	IC TLC2933IPWR-12	
IC3401	6-700-394-01	IC BA25BC0FP-E2	
IC3402	8-759-677-37	IC MT48LC2M32B2TG-6	
IC3403	8-759-460-29	IC PST9120NL	
IC3404	8-759-669-75	IC TLC2932IPWR	
IC3405	8-759-485-79	IC TC7SET08FU(TE85R)	
IC3406	8-759-485-79	IC TC7SET08FU(TE85R)	
IC3407	8-759-485-79	IC TC7SET08FU(TE85R)	
IC3408	8-759-672-57	IC CXD9509AQ	
IC3409	8-759-833-72	IC NJM2870F25-TE2	
IC3410	8-752-367-59	IC CXD2309Q	
IC3411	8-759-082-57	IC TC7W04FU(TE12R)	
IC3412	8-759-082-58	IC TC7W08FU(TE12R)	
IC3413	8-759-595-97	IC SN74LV4053ANSR	
IC3414	8-759-548-56	IC M52055FP	
	COIL		
L3001	1-216-295-91	SHORT CHIP	0
L3089	1-414-233-22	FERRITE	0µH
L3102	1-412-946-11	INDUCTOR	3.9µH
L3301	1-412-058-11	INDUCTOR	10µH
L3302	1-469-555-21	INDUCTOR	10µH
L3303	1-412-052-21	INDUCTOR	1µH
L3304	1-469-555-21	INDUCTOR	10µH
L3305	1-469-555-21	INDUCTOR	10µH
L3306	1-469-561-21	INDUCTOR	100µH
L3307	1-469-555-21	INDUCTOR	10µH
L3308	1-469-561-21	INDUCTOR	100µH
L3309	1-469-561-21	INDUCTOR	100µH
L3310	1-469-561-21	INDUCTOR	100µH
L3311	1-469-561-21	INDUCTOR	100µH
L3312	1-469-555-21	INDUCTOR	10µH
L3401	1-412-058-11	INDUCTOR	10µH
L3402	1-412-052-21	INDUCTOR	1µH
L3403	1-469-561-21	INDUCTOR	100µH
L3404	1-469-561-21	INDUCTOR	100µH
L3405	1-469-555-21	INDUCTOR	10µH
L3406	1-469-555-21	INDUCTOR	10µH
L3407	1-469-555-21	INDUCTOR	10µH
L3408	1-469-555-21	INDUCTOR	10µH
L3409	1-469-555-21	INDUCTOR	10µH
L3410	1-412-058-11	INDUCTOR	10µH
L3411	1-412-058-11	INDUCTOR	10µH
L3412	1-469-555-21	INDUCTOR	10µH
L3413	1-469-555-21	INDUCTOR	10µH
L3414	1-469-555-21	INDUCTOR	10µH
L3416	1-469-555-21	INDUCTOR	10µH
	TRANSISTOR		
Q3005	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	
Q3006	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	
Q3007	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	
Q3089	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR	
Q3090	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR	
Q3091	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q3301	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	
Q3302	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	
Q3303	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	
Q3304	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	
Q3305	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR	
Q3306	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR	
Q3307	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	
Q3308	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR	

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REF. NO.	PART NO.	DESCRIPTION	VALUES		
Q3309	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR			
Q3310	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR			
Q3311	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR			
Q3401	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR			
Q3402	8-729-028-28	TRANSISTOR 2SK2036(TE85L)			
Q3403	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR			
Q3404	8-729-028-28	TRANSISTOR 2SK2036(TE85L)			
Q3405	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR			
Q3406	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR			
Q3407	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR			
Q3408	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR			
Q3409	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR			
Q3410	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR			
Q3411	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR			
Q3412	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR			
Q3413	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR			
Q3414	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR			
Q3415	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR			
	RESISTOR				
R3001	1-216-833-11	METAL CHIP	10K	5%	1/10W
R3002	1-216-864-11	SHORT CHIP	0		
R3021	1-216-809-11	METAL CHIP	100	5%	1/10W
R3022	1-216-809-11	METAL CHIP	100	5%	1/10W
R3023	1-216-833-11	METAL CHIP	10K	5%	1/10W
R3035	1-216-809-11	METAL CHIP	100	5%	1/10W
R3036	1-216-809-11	METAL CHIP	100	5%	1/10W
R3037	1-216-809-11	METAL CHIP	100	5%	1/10W
R3038	1-218-686-11	METAL CHIP	560	0.50%	1/16W
R3039	1-218-686-11	METAL CHIP	560	0.50%	1/16W
R3040	1-218-686-11	METAL CHIP	560	0.50%	1/16W
R3050	1-216-809-11	METAL CHIP	100	5%	1/10W
R3079	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3089	1-216-864-11	SHORT CHIP	0		
R3091	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R3092	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R3095	1-216-845-11	METAL CHIP	100K	5%	1/10W
R3096	1-216-817-11	METAL CHIP	470	5%	1/10W
R3097	1-216-845-11	METAL CHIP	100K	5%	1/10W
R3098	1-216-805-11	METAL CHIP	47	5%	1/10W
R3099	1-216-805-11	METAL CHIP	47	5%	1/10W
R3100	1-216-809-11	METAL CHIP	100	5%	1/10W
R3101	1-216-809-11	METAL CHIP	100	5%	1/10W
R3102	1-216-809-11	METAL CHIP	100	5%	1/10W

REF. NO.	PART NO.	DESCRIPTION	VALUES		
R3103	1-216-822-11	METAL CHIP	1.2K	5%	1/10W
R3104	1-216-809-11	METAL CHIP	100	5%	1/10W
R3105	1-216-809-11	METAL CHIP	100	5%	1/10W
R3106	1-216-818-11	METAL CHIP	560	5%	1/10W
R3107	1-216-864-11	SHORT CHIP	0		
R3108	1-216-817-11	METAL CHIP	470	5%	1/10W
R3109	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R3110	1-216-809-11	METAL CHIP	100	5%	1/10W
R3111	1-216-809-11	METAL CHIP	100	5%	1/10W
R3301	1-216-809-11	METAL CHIP	100	5%	1/10W
R3302	1-216-817-11	METAL CHIP	470	5%	1/10W
R3303	1-218-710-11	METAL CHIP	5.6K	0.50%	1/16W
R3304	1-216-809-11	METAL CHIP	100	5%	1/10W
R3305	1-216-809-11	METAL CHIP	100	5%	1/10W
R3306	1-216-809-11	METAL CHIP	100	5%	1/10W
R3307	1-216-864-11	SHORT CHIP	0		
R3308	1-216-864-11	SHORT CHIP	0		
R3309	1-218-662-11	METAL CHIP	56	0.50%	1/16W
R3310	1-218-662-11	METAL CHIP	56	0.50%	1/16W
R3311	1-218-662-11	METAL CHIP	56	0.50%	1/16W
R3312	1-218-662-11	METAL CHIP	56	0.50%	1/16W
R3313	1-216-835-11	METAL CHIP	15K	5%	1/10W
R3314	1-218-665-11	METAL CHIP	75	0.50%	1/16W
R3315	1-216-835-11	METAL CHIP	15K	5%	1/10W
R3316	1-218-664-11	METAL CHIP	68	0.50%	1/16W
R3317	1-218-664-11	METAL CHIP	68	0.50%	1/16W
R3318	1-218-665-11	METAL CHIP	75	0.50%	1/16W
R3319	1-218-662-11	METAL CHIP	56	0.50%	1/16W
R3320	1-218-662-11	METAL CHIP	56	0.50%	1/16W
R3321	1-218-662-11	METAL CHIP	56	0.50%	1/16W
R3322	1-218-662-11	METAL CHIP	56	0.50%	1/16W
R3323	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R3324	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R3325	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R3326	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R3327	1-216-835-11	METAL CHIP	15K	5%	1/10W
R3328	1-216-864-11	SHORT CHIP	0		
R3329	1-216-815-11	METAL CHIP	330	5%	1/10W
R3330	1-216-815-11	METAL CHIP	330	5%	1/10W
R3331	1-216-841-11	METAL CHIP	47K	5%	1/10W
R3332	1-218-709-11	METAL CHIP	5.1K	0.50%	1/16W
R3333	1-216-864-11	SHORT CHIP	0		
R3334	1-216-809-11	METAL CHIP	100	5%	1/10W
R3335	1-216-833-11	METAL CHIP	10K	5%	1/10W

B

REF. NO.	PART NO.	DESCRIPTION	VALUES		
R3337	1-216-820-11	METAL CHIP	820	5%	1/10W
R3338	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3339	1-216-855-11	METAL CHIP	680K	5%	1/10W
R3340	1-216-855-11	METAL CHIP	680K	5%	1/10W
R3341	1-216-813-11	METAL CHIP	220	5%	1/10W
R3342	1-218-705-11	METAL CHIP	3.6K	0.50%	1/16W
R3343	1-216-809-11	METAL CHIP	100	5%	1/10W
R3344	1-216-853-11	METAL CHIP	470K	5%	1/10W
R3345	1-218-704-11	METAL CHIP	3.3K	0.50%	1/16W
R3346	1-216-809-11	METAL CHIP	100	5%	1/10W
R3347	1-216-815-11	METAL CHIP	330	5%	1/10W
R3348	1-216-864-11	SHORT CHIP	0		
R3349	1-218-687-11	METAL CHIP	620	0.50%	1/16W
R3350	1-216-814-11	METAL CHIP	270	5%	1/10W
R3351	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R3352	1-216-853-11	METAL CHIP	470K	5%	1/10W
R3353	1-216-837-11	METAL CHIP	22K	5%	1/10W
R3354	1-216-813-11	METAL CHIP	220	5%	1/10W
R3355	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3356	1-216-819-11	METAL CHIP	680	5%	1/10W
R3357	1-218-676-11	METAL CHIP	220	0.50%	1/16W
R3358	1-218-676-11	METAL CHIP	220	0.50%	1/16W
R3359	1-218-676-11	METAL CHIP	220	0.50%	1/16W
R3360	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R3361	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R3364	1-216-864-11	SHORT CHIP	0		
R3365	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R3366	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R3367	1-216-803-11	METAL CHIP	33	5%	1/10W
R3369	1-216-864-11	SHORT CHIP	0		
R3371	1-218-686-11	METAL CHIP	560	0.50%	1/16W
R3372	1-216-817-11	METAL CHIP	470	5%	1/10W
R3373	1-216-817-11	METAL CHIP	470	5%	1/10W
R3374	1-216-809-11	METAL CHIP	100	5%	1/10W
R3375	1-218-686-11	METAL CHIP	560	0.50%	1/16W
R3376	1-218-710-11	METAL CHIP	5.6K	0.50%	1/16W
R3377	1-216-817-11	METAL CHIP	470	5%	1/10W
R3378	1-216-817-11	METAL CHIP	470	5%	1/10W
R3379	1-216-809-11	METAL CHIP	100	5%	1/10W
R3380	1-218-686-11	METAL CHIP	560	0.50%	1/16W
R3381	1-218-710-11	METAL CHIP	5.6K	0.50%	1/16W
R3382	1-216-864-11	SHORT CHIP	0		
R3383	1-216-817-11	METAL CHIP	470	5%	1/10W
R3384	1-216-809-11	METAL CHIP	100	5%	1/10W
R3410	1-216-833-11	METAL CHIP	10K	5%	1/10W
R3421	1-216-864-11	SHORT CHIP	0		
R3422	1-216-864-11	SHORT CHIP	0		
R3423	1-216-813-11	METAL CHIP	220	5%	1/10W
R3428	1-216-803-11	METAL CHIP	33	5%	1/10W
R3429	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R3432	1-216-815-11	METAL CHIP	330	5%	1/10W
R3434	1-216-809-11	METAL CHIP	100	5%	1/10W
R3445	1-216-864-11	SHORT CHIP	0		
R3446	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3447	1-216-819-11	METAL CHIP	680	5%	1/10W
R3448	1-216-855-11	METAL CHIP	680K	5%	1/10W
R3452	1-216-864-11	SHORT CHIP	0		
R3454	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R3460	1-216-833-11	METAL CHIP	10K	5%	1/10W
R3461	1-216-833-11	METAL CHIP	10K	5%	1/10W
R3464	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3465	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3467	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3470	1-216-809-11	METAL CHIP	100	5%	1/10W
R3471	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3472	1-216-801-11	METAL CHIP	22	5%	1/10W
R3475	1-216-809-11	METAL CHIP	100	5%	1/10W
R3476	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3477	1-218-701-11	METAL CHIP	2.4K	0.50%	1/16W
R3478	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3483	1-218-701-11	METAL CHIP	2.4K	0.50%	1/16W
R3484	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3485	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3486	1-216-801-11	METAL CHIP	22	5%	1/10W
R3489	1-216-864-11	SHORT CHIP	0		
R3490	1-216-864-11	SHORT CHIP	0		
R3491	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3492	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3493	1-218-701-11	METAL CHIP	2.4K	0.50%	1/16W
R3495	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3496	1-216-801-11	METAL CHIP	22	5%	1/10W
R3497	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R3498	1-216-818-11	METAL CHIP	560	5%	1/10W
R3499	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3501	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3502	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3503	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3504	1-216-821-11	METAL CHIP	1K	5%	1/10W

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REF. NO.	PART NO.	DESCRIPTION	VALUES		
R3505	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3506	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3507	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3508	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3509	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3510	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3511	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3512	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3800	1-216-864-11	SHORT CHIP	0		
R3802	1-218-678-11	METAL CHIP	270	0.50%	1/16W
R3803	1-218-678-11	METAL CHIP	270	0.50%	1/16W
R3804	1-218-678-11	METAL CHIP	270	0.50%	1/16W
R3805	1-218-678-11	METAL CHIP	270	0.50%	1/16W
R3806	1-218-662-11	METAL CHIP	56	0.50%	1/16W
R3807	1-218-670-11	METAL CHIP	120	0.50%	1/16W
R3808	1-218-670-11	METAL CHIP	120	0.50%	1/16W
R3809	1-218-670-11	METAL CHIP	120	0.50%	1/16W
R3810	1-218-670-11	METAL CHIP	120	0.50%	1/16W
R3811	1-216-809-11	METAL CHIP	100	5%	1/10W
R3812	1-216-809-11	METAL CHIP	100	5%	1/10W
R3813	1-216-809-11	METAL CHIP	100	5%	1/10W
R3814	1-218-644-11	METAL CHIP	10	0.50%	1/16W
R3815	1-218-648-11	METAL CHIP	15	0.50%	1/16W
R3816	1-218-652-11	METAL CHIP	22	0.50%	1/16W
R3817	1-218-652-11	METAL CHIP	22	0.50%	1/16W
R3820	1-218-684-11	METAL CHIP	470	0.50%	1/16W
R3821	1-218-684-11	METAL CHIP	470	0.50%	1/16W
R3822	1-218-684-11	METAL CHIP	470	0.50%	1/16W
R3823	1-216-826-11	METAL CHIP	2.7K	5%	1/10W
R3824	1-216-826-11	METAL CHIP	2.7K	5%	1/10W
R3825	1-216-826-11	METAL CHIP	2.7K	5%	1/10W
R3826	1-216-809-11	METAL CHIP	100	5%	1/10W
R3828	1-218-684-11	METAL CHIP	470	0.50%	1/16W
R3829	1-218-684-11	METAL CHIP	470	0.50%	1/16W
R3830	1-218-684-11	METAL CHIP	470	0.50%	1/16W
R3831	1-216-864-11	SHORT CHIP	0		
R3832	1-216-864-11	SHORT CHIP	0		
R3833	1-216-864-11	SHORT CHIP	0		
R3834	1-218-678-11	METAL CHIP	270	0.50%	1/16W
R3835	1-218-678-11	METAL CHIP	270	0.50%	1/16W
R3836	1-218-678-11	METAL CHIP	270	0.50%	1/16W
R3837	1-218-678-11	METAL CHIP	270	0.50%	1/16W
R3838	1-218-678-11	METAL CHIP	270	0.50%	1/16W
R3839	1-218-670-11	METAL CHIP	120	0.50%	1/16W
R3840	1-216-803-11	METAL CHIP	33	5%	1/10W
R3841	1-218-670-11	METAL CHIP	120	0.50%	1/16W
R3842	1-218-689-11	METAL CHIP	750	0.50%	1/16W
R3846	1-216-801-11	METAL CHIP	22	5%	1/10W
R3847	1-216-801-11	METAL CHIP	22	5%	1/10W
R3848	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R3849	1-218-675-11	METAL CHIP	200	0.50%	1/16W
R3850	1-218-675-11	METAL CHIP	200	0.50%	1/16W
R3851	1-216-809-11	METAL CHIP	100	5%	1/10W
R3852	1-218-675-11	METAL CHIP	200	0.50%	1/16W
R3854	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R3857	1-216-809-11	METAL CHIP	100	5%	1/10W
R3858	1-218-704-11	METAL CHIP	3.3K	0.50%	1/16W
R3862	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R3863	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R3864	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R3865	1-216-809-11	METAL CHIP	100	5%	1/10W
R3866	1-414-234-22	FERRITE	0µH		
R3867	1-414-234-22	FERRITE	0µH		
R3868	1-414-234-22	FERRITE	0µH		
R3869	1-218-719-11	METAL CHIP	13K	0.50%	1/16W
R3870	1-218-719-11	METAL CHIP	13K	0.50%	1/16W
R3871	1-218-719-11	METAL CHIP	13K	0.50%	1/16W
R3881	1-216-807-11	METAL CHIP	68	5%	1/10W
R3882	1-216-807-11	METAL CHIP	68	5%	1/10W
R3883	1-216-807-11	METAL CHIP	68	5%	1/10W
R3915	1-218-644-11	METAL CHIP	10	0.50%	1/16W
R3916	1-218-644-11	METAL CHIP	10	0.50%	1/16W
R3917	1-218-644-11	METAL CHIP	10	0.50%	1/16W
R3923	1-412-363-21	FERRITE	0µH		
R3933	1-216-864-11	SHORT CHIP	0		
R3937	1-216-809-11	METAL CHIP	100	5%	1/10W
R3953	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3954	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3955	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3956	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R3957	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R3958	1-216-825-11	METAL CHIP	2.2K	5%	1/10W

RESISTOR BRIDGE

RB3304	1-234-525-21	RES, CHIP NETWORK	56
RB3305	1-234-525-21	RES, CHIP NETWORK	56
RB3306	1-234-525-21	RES, CHIP NETWORK	56
RB3307	1-234-525-21	RES, CHIP NETWORK	56

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

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B G

REF. NO.	PART NO.	DESCRIPTION	VALUES		
RB3401	1-234-524-21	RES, CHIP NETWORK	33		
RB3402	1-234-524-21	RES, CHIP NETWORK	33		
RB3403	1-234-524-21	RES, CHIP NETWORK	33		
RB3404	1-234-524-21	RES, CHIP NETWORK	33		
RB3405	1-234-524-21	RES, CHIP NETWORK	33		
RB3406	1-234-524-21	RES, CHIP NETWORK	33		
RB3407	1-239-409-11	RES, CHIP NETWORK	47	-3216	
RB3408	1-239-409-11	RES, CHIP NETWORK	47	-3216	
RB3409	1-239-409-11	RES, CHIP NETWORK	47	-3216	
RB3410	1-239-409-11	RES, CHIP NETWORK	47	-3216	
RB3411	1-239-409-11	RES, CHIP NETWORK	47	-3216	
RB3412	1-239-409-11	RES, CHIP NETWORK	47	-3216	
RB3421	1-239-409-11	RES, CHIP NETWORK	47	-3216	
RB3422	1-239-409-11	RES, CHIP NETWORK	47	-3216	
RB3423	1-239-409-11	RES, CHIP NETWORK	47	-3216	
RB3424	1-239-409-11	RES, CHIP NETWORK	47	-3216	
RB3425	1-239-409-11	RES, CHIP NETWORK	47	-3216	
RB3426	1-239-409-11	RES, CHIP NETWORK	47	-3216	
RB3427	1-239-409-11	RES, CHIP NETWORK	47	-3216	
RB3428	1-239-409-11	RES, CHIP NETWORK	47	-3216	
	CRYSTAL				
X3089	1-781-945-21	VIBRATOR, CERAMIC			
X3401	1-781-887-21	VIBRATOR, CRYSTAL			
X3402	1-781-579-21	OSCILLATOR, CRYSTAL			

G

*	**A-1316-566-A**	**G BOARD, COMPLETE**			
	4-044-778-11	COVER, CAP TYPE CONDENSER			
	4-382-854-11	SCREW (M3X10), P, SW (+)			
*	7-322-065-48	RUBBER, SILICONE RTV (KE-3490)			
	CAPACITOR				
C5001	1-164-645-11	CERAMIC	1000pF	10%	500V
C5002	1-164-645-11	CERAMIC	1000pF	10%	500V
C5006	1-104-665-11	ELECT	100µF	20%	25V
C5007	1-164-645-11	CERAMIC	1000pF	10%	500V
C5008	1-164-645-11	CERAMIC	1000pF	10%	500V
C5009	1-126-953-11	ELECT	2200µF	20%	35V
C5010	1-126-953-11	ELECT	2200µF	20%	35V
C5011	1-164-645-11	CERAMIC	1000pF	10%	500V
C5012	1-164-645-11	CERAMIC	1000pF	10%	500V
C5015	1-115-758-11	ELECT	470µF	20%	16V
C5016	1-126-942-61	ELECT	1000µF	20%	25V
C5017	1-126-942-61	ELECT	1000µF	20%	25V
C5018	1-126-952-11	ELECT	1000µF	20%	35V
C5019	1-126-952-11	ELECT	1000µF	20%	35V
C5020	1-110-626-11	ELECT	330µF	20%	160V
C5021	1-115-771-51	ELECT	0.0047F	20%	16V
C5022	1-126-947-11	ELECT	47µF	20%	25V
C5024	1-107-888-11	ELECT	47µF	20%	25V
C5025	1-126-947-11	ELECT	47µF	20%	25V
C5026	1-126-947-11	ELECT	47µF	20%	25V
C5027	1-126-951-11	ELECT	470µF	20%	35V
C5028	1-126-951-11	ELECT	470µF	20%	35V
C5029	1-107-639-11	ELECT	47µF	20%	160V
C5030	1-126-947-11	ELECT	47µF	20%	25V
C5031	1-126-768-11	ELECT	2200µF	20%	16V
C5038	1-126-947-11	ELECT	47µF	20%	25V
C5039	1-126-947-11	ELECT	47µF	20%	25V
C5040	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C5041	1-126-767-11	ELECT	1000µF	20%	16V
C5042	1-126-963-11	ELECT	4.7µF	20%	50V
C5043	1-126-935-11	ELECT	470µF	20%	16V
C5047	1-162-970-11	CERAMIC CHIP	0.01µF	10%	16V
C5049	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C5050	1-128-554-11	ELECT	330µF	20%	63V
C5051	1-126-961-11	ELECT	2.2µF	20%	50V
C5053	1-126-967-11	ELECT	47µF	20%	50V
C5054	1-126-955-11	ELECT	4700µF	20%	35V
C5055	1-126-933-11	ELECT	100µF	20%	16V
C6001	1-126-967-11	ELECT	47µF	20%	50V
C6002	1-104-666-11	ELECT	220µF	20%	25V
C6004	1-126-967-11	ELECT	47µF	20%	50V
C6008	1-117-228-11	MYLAR	2.2µF	10%	450V
⚠ C6012	1-119-888-51	CERAMIC	2200pF	20%	250V
⚠ C6013	1-119-888-51	CERAMIC	2200pF	20%	250V
⚠ C6014	1-104-708-11	MYLAR	0.47µF	20%	250V
C6015	1-161-964-91	CERAMIC	0.0047µF		250V
C6016	1-161-964-91	CERAMIC	0.0047µF		250V
C6017	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C6018	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C6019	1-126-968-11	ELECT	100µF	20%	50V
C6020	1-126-963-11	ELECT	4.7µF	20%	50V
C6021	1-126-964-11	ELECT	10µF	20%	50V
C6022	1-161-964-91	CERAMIC	0.0047µF		250V
C6023	1-161-964-91	CERAMIC	0.0047µF		250V

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	REF. NO.	PART NO.	DESCRIPTION	VALUES		
	C6025	1-136-479-11	FILM	0.001µF	2%	50V
	C6029	1-136-165-00	FILM	0.1µF	5%	50V
	C6030	1-126-947-11	ELECT	47µF	20%	25V
	C6031	1-137-750-11	ELECT	1500µF	20%	250V
	C6032	1-137-750-11	ELECT	1500µF	20%	250V
	C6041	1-125-969-91	CERAMIC	680pF	10%	1KV
	C6042	1-125-969-91	CERAMIC	680pF	10%	1KV
⚠	C6043	1-104-706-11	MYLAR	0.22µF	20%	250V
	C6046	1-126-968-11	ELECT	100µF	20%	50V
	C6047	1-165-954-11	FILM	56000pF	3%	800V
		CONNECTOR				
*	CN5001	1-564-508-11	PLUG,CONNECTOR		5P	
*	CN5002	1-564-507-11	PLUG,CONNECTOR		4P	
*	CN5003	1-564-510-11	PLUG,CONNECTOR		7P	
*	CN5004	1-766-177-11	PIN,CONNECTOR (PC BOARD)		9P	
	CN5005	1-695-915-11	TAB (CONTACT)			
	CN5006	1-695-915-11	TAB (CONTACT)			
	CN5007	1-695-915-11	TAB (CONTACT)			
*	CN6005	1-580-843-11	PIN,CONNECTOR (POWER)			
		DIODE				
	D5001	8-719-083-67	DIODE UDZSTE-1720B			
	D5002	8-719-060-89	DIODE D4SBS6-F			
	D5003	8-719-060-89	DIODE D4SBS6-F			
	D5004	8-719-083-45	DIODE 31DF4N-FC5			
	D5005	8-719-083-45	DIODE 31DF4N-FC5			
	D5006	8-719-052-37	DIODE F10P04Q			
	D5007	8-719-988-61	DIODE 1SS355TE-17			
	D5008	8-719-028-45	DIODE D2L20U-TA			
	D5009	8-719-028-45	DIODE D2L20U-TA			
	D5010	8-719-200-31	DIODE 21DQ06N-TA2B1			
	D5011	8-719-988-61	DIODE 1SS355TE-17			
	D5012	8-719-056-93	DIODE MM3Z18VST1			
	D5013	8-719-069-56	DIODE UDZSTE-176.2B			
	D5014	8-719-988-61	DIODE 1SS355TE-17			
	D5015	8-719-988-61	DIODE 1SS355TE-17			
	D5016	8-719-083-44	DIODE FSQ05A04			
	D5017	8-719-073-25	DIODE S1VBA20			
	D5018	8-719-056-84	DIODE UDZSTE-177.5B			
	D5019	8-719-988-61	DIODE 1SS355TE-17			
	D5020	8-719-988-61	DIODE 1SS355TE-17			

	REF. NO.	PART NO.	DESCRIPTION	VALUES
	D5021	8-719-988-61	DIODE 1SS355TE-17	
	D5022	8-719-988-61	DIODE 1SS355TE-17	
	D5023	8-719-988-61	DIODE 1SS355TE-17	
	D5024	8-719-988-61	DIODE 1SS355TE-17	
	D5025	8-719-988-61	DIODE 1SS355TE-17	
	D5026	8-719-988-61	DIODE 1SS355TE-17	
	D5027	8-719-069-54	DIODE UDZSTE-175.1B	
	D5031	8-719-988-61	DIODE 1SS355TE-17	
	D5033	8-719-988-61	DIODE 1SS355TE-17	
	D5034	8-719-083-60	DIODE UDZSTE-174.7B	
	D6001	8-719-988-61	DIODE 1SS355TE-17	
	D6002	8-719-948-45	DIODE ERA22-08TP3	
	D6003	8-719-070-63	DIODE PDZ10B-115	
	D6004	8-719-988-61	DIODE 1SS355TE-17	
	D6005	8-719-988-61	DIODE 1SS355TE-17	
	D6006	8-719-063-70	DIODE D1NL20U-TA2	
	D6007	8-719-022-99	DIODE D6SB60L	
	D6009	8-719-083-60	DIODE UDZSTE-174.7B	
	D6011	8-719-988-61	DIODE 1SS355TE-17	
	D6012	6-500-158-01	DIODE 10ERA60-TA2B5	
	D6019	8-719-083-60	DIODE UDZSTE-174.7B	
	D6023	8-719-068-00	DIODE ERC04-06SE	
	D6024	8-719-068-00	DIODE ERC04-06SE	
	D6030	8-719-063-70	DIODE D1NL20U-TA2	
		FUSE		
⚠	F6001	1-576-193-11	FUSE	6.3A/125V
		FERRITE BEAD		
	FB5001	1-410-396-41	FERRITE	0.45µH
	FB5002	1-410-396-41	FERRITE	0.45µH
	FB5003	1-410-396-41	FERRITE	0.45µH
	FB5004	1-410-396-41	FERRITE	0.45µH
	FB5005	1-410-396-41	FERRITE	0.45µH
	FB5006	1-410-396-41	FERRITE	0.45µH
	FB6001	1-410-396-41	FERRITE	0.45µH
	FB6004	1-216-295-91	SHORT CHIP	0
	FB6005	1-216-295-91	SHORT CHIP	0
	FB6006	1-216-295-91	SHORT CHIP	0
	FB6007	1-216-295-91	SHORT CHIP	0
	FB6013	1-410-397-21	FERRITE	1.1µH
	FB6014	1-410-397-21	FERRITE	1.1µH
	FB6015	1-410-397-21	FERRITE	1.1µH
	FB6016	1-410-397-21	FERRITE	1.1µH

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REF. NO.	PART NO.	DESCRIPTION	VALUES
	FUSE CLIP		
FH6001	1-533-223-11	CLIP, FUSE	
FH6002	1-533-223-11	CLIP, FUSE	
	IC		
IC501	8-749-012-13	IC DM-58	
IC5002	8-759-103-93	IC UPC393C	
IC5003	8-759-701-84	IC NJM7905FA	
IC5004	8-759-640-19	IC PQ1CG2032FZ	
IC5005	8-759-198-31	IC UPC1093J-1-T	
IC5006	8-759-471-81	IC PQ05RD11	
IC6003	8-759-670-30	IC MCZ3001D	
	CHIP CONDUCTOR		
JR5002	1-216-864-11	SHORT CHIP	0
JR5003	1-216-295-91	SHORT CHIP	0
	COIL		
L5001	1-412-523-41	INDUCTOR	6.8µH
L5002	1-412-523-41	INDUCTOR	6.8µH
L5003	1-412-529-11	INDUCTOR	22µH
L5004	1-412-531-31	INDUCTOR	33µH
L5005	1-412-527-11	INDUCTOR	15µH
L5006	1-412-533-21	INDUCTOR	47µH
L5007	1-412-533-21	INDUCTOR	47µH
L5008	1-412-529-11	INDUCTOR	22µH
L5009	1-412-529-11	INDUCTOR	22µH
L5010	1-412-521-31	INDUCTOR	4.7µH
L5011	1-412-521-31	INDUCTOR	4.7µH
L5012	1-406-663-21	INDUCTOR	47µH
L5013	1-412-525-31	INDUCTOR	10µH
L5014	1-406-663-21	INDUCTOR	47µH
L5015	1-424-862-11	INDUCTOR	33µH
L5016	1-406-663-21	INDUCTOR	47µH
L5017	1-412-537-31	INDUCTOR	100µH
⚠ L6001	1-437-479-11	TRANSFORMER, LINE FILTER	
⚠ L6002	1-437-479-11	TRANSFORMER, LINE FILTER	
L6003	1-424-862-11	INDUCTOR	33µH
	PHOTO COUPLER		
PH6001	8-749-924-35	PHOTO COUPLER	ON3171-R
⚠ PH6002	8-749-924-35	PHOTO COUPLER	ON3171-R

REF. NO.	PART NO.	DESCRIPTION	VALUES		
	IC LINK				
⚠ PS5001	1-533-597-31	LINK, IC			
⚠ PS5002	1-533-597-31	LINK, IC			
	TRANSISTOR				
Q5001	8-729-050-50	TRANSISTOR 2SD1782K-T146-R			
Q5002	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR			
Q5003	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR			
Q5004	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR			
Q5005	8-729-027-23	TRANSISTOR DTA114EKA-T146			
Q5006	8-729-901-87	TRANSISTOR 2SC2411K-T-146-CQ			
Q5007	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR			
Q6005	8-729-052-32	TRANSISTOR IRFIB7N50A-LF31			
Q6006	8-729-052-32	TRANSISTOR IRFIB7N50A-LF31			
	RESISTOR				
R5005	1-218-867-11	METAL CHIP	6.8K	5%	1/10W
R5006	1-216-833-11	METAL CHIP	10K	5%	1/10W
R5007	1-249-377-11	CARBON	0.47	5%	1/4W
R5010	1-247-903-00	CARBON	1M	5%	1/4W
R5011	1-216-818-11	METAL CHIP	560	5%	1/10W
R5012	1-216-361-00	METAL OXIDE	0.22	5%	2W
R5013	1-216-833-11	METAL CHIP	10K	5%	1/10W
R5014	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R5015	1-218-708-11	METAL CHIP	4.7K	0.50%	1/16W
R5016	1-216-833-11	METAL CHIP	10K	5%	1/10W
R5017	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R5018	1-216-821-11	METAL CHIP	1K	5%	1/10W
R5019	1-216-857-11	METAL CHIP	1M	5%	1/10W
R5020	1-216-821-11	METAL CHIP	1K	5%	1/10W
R5021	1-216-821-11	METAL CHIP	1K	5%	1/10W
R5022	1-218-708-11	METAL CHIP	4.7K	0.50%	1/16W
R5023	1-218-750-11	METAL CHIP	270K	0.50%	1/16W
R5024	1-218-682-11	METAL CHIP	390	0.50%	1/16W
R5025	1-218-697-11	METAL CHIP	1.6K	0.50%	1/16W
R5026	1-216-833-11	METAL CHIP	10K	5%	1/10W
R5027	1-216-821-11	METAL CHIP	1K	5%	1/10W
R5028	1-216-821-11	METAL CHIP	1K	5%	1/10W
R5029	1-216-837-11	METAL CHIP	22K	5%	1/10W
R5030	1-216-837-11	METAL CHIP	22K	5%	1/10W
R5032	1-249-415-11	CARBON	680	5%	1/4W
R5034	1-216-833-11	METAL CHIP	10K	5%	1/10W
R5035	1-216-819-11	METAL CHIP	680	5%	1/10W
R5036	1-216-819-11	METAL CHIP	680	5%	1/10W

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G H2

REF. NO.	PART NO.	DESCRIPTION	VALUES		
R5037	1-216-821-11	METAL CHIP	1K	5%	1/10W
R5038	1-216-821-11	METAL CHIP	1K	5%	1/10W
R5039	1-216-864-11	SHORT CHIP	0		
R5040	1-216-833-11	METAL CHIP	10K	5%	1/10W
R5041	1-215-866-11	METAL OXIDE	330	5%	1W
R5042	1-216-833-11	METAL CHIP	10K	5%	1/10W
R5043	1-216-821-11	METAL CHIP	1K	5%	1/10W
R5044	1-216-821-11	METAL CHIP	1K	5%	1/10W
R5045	1-216-832-11	METAL CHIP	8.2K	5%	1/10W
R5047	1-216-833-11	METAL CHIP	10K	5%	1/10W
R5048	1-216-833-11	METAL CHIP	10K	5%	1/10W
R6002	1-240-251-11	CEMENTED	6.8	5%	10W
R6003	1-260-328-11	CARBON	1K	5%	1/2W
R6004	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R6006	1-216-430-11	METAL OXIDE	390	5%	1W
R6007	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R6008	1-216-845-11	METAL CHIP	100K	5%	1/10W
R6015	1-219-776-11	CARBON	2.2M	10%	1/2W
R6036	1-218-715-11	METAL CHIP	9.1K	0.50%	1/16W
R6037	1-215-481-00	METAL	330K	1%	1/4W
R6038	1-215-481-00	METAL	330K	1%	1/4W
R6039	1-216-851-11	METAL CHIP	330K	5%	1/10W
R6040	1-215-481-00	METAL	330K	1%	1/4W
R6041	1-218-668-11	METAL CHIP	100	0.50%	1/16W
R6042	1-218-719-11	METAL CHIP	13K	0.50%	1/16W
R6045	1-218-675-11	METAL CHIP	200	0.50%	1/16W
R6046	1-216-813-11	METAL CHIP	220	5%	1/10W
R6047	1-216-813-11	METAL CHIP	220	5%	1/10W
R6050	1-249-417-11	CARBON	1K	5%	1/4W
R6054	1-249-393-11	CARBON	10	5%	1/4W
R6056	1-260-131-11	CARBON	470K	5%	1/2W
R6057	1-260-131-11	CARBON	470K	5%	1/2W
R6058	1-249-393-11	CARBON	10	5%	1/4W
R6062	1-216-833-11	METAL CHIP	10K	5%	1/10W
R6063	1-216-833-11	METAL CHIP	10K	5%	1/10W
R6064	1-202-933-61	FUSIBLE	0.1	10%	1/2W
R6076	1-243-979-71	METAL OXIDE	0.1	5%	2W
R6080	1-243-979-71	METAL OXIDE	0.1	5%	2W
R6081	1-249-393-11	CARBON	10	5%	1/4W

RELAY

⚠	RY6002	1-755-395-11	RELAY (AC POWER)
⚠	RY6003	1-755-395-11	RELAY (AC POWER)

REF. NO.	PART NO.	DESCRIPTION	VALUES		
		TRANSFORMER			
⚠ T6001	1-437-436-11	CONVERTER TRANSFORMER (PIT)			
⚠ T6004	1-435-675-11	TRANSFORMER, STANDBY			
		THERMISTOR			
TH6002	1-804-475-21	POSISTOR			
		VARISTOR			
VD6001	1-801-073-31	VARISTOR TNR14V471K660			

H2

*	**A-1401-059-A**	**H2 BOARD, MOUNTED**	
		CONNECTOR	
* CN9201	1-564-520-11	PLUG,CONNECTOR	5P
* CN9202	1-564-521-11	PLUG,CONNECTOR	6P
		RESISTOR	
R9201	1-218-684-11	METAL CHIP	470 0.50% 1/16W
R9202	1-218-684-11	METAL CHIP	470 0.50% 1/16W
R9203	1-218-684-11	METAL CHIP	470 0.50% 1/16W
R9204	1-218-684-11	METAL CHIP	470 0.50% 1/16W
R9205	1-218-688-11	METAL CHIP	680 0.50% 1/16W
R9206	1-218-688-11	METAL CHIP	680 0.50% 1/16W
R9207	1-218-692-11	METAL CHIP	1K 0.50% 1/16W
R9208	1-218-696-11	METAL CHIP	1.5K 0.50% 1/16W
R9209	1-218-700-11	METAL CHIP	2.2K 0.50% 1/16W
R9210	1-218-704-11	METAL CHIP	3.3K 0.50% 1/16W
R9211	1-218-712-11	METAL CHIP	6.8K 0.50% 1/16W
		SWITCH	
S9201	1-572-198-11	SWITCH KEYBOARD	
S9202	1-572-198-11	SWITCH KEYBOARD	
S9203	1-572-198-11	SWITCH KEYBOARD	
S9204	1-572-198-11	SWITCH KEYBOARD	
S9205	1-572-198-11	SWITCH KEYBOARD	
S9206	1-572-198-11	SWITCH KEYBOARD	
S9207	1-572-198-11	SWITCH KEYBOARD	
S9208	1-572-198-11	SWITCH KEYBOARD	
S9209	1-572-198-11	SWITCH KEYBOARD	
S9210	1-572-198-11	SWITCH KEYBOARD	
S9211	1-572-198-11	SWITCH KEYBOARD	
S9212	1-572-198-11	SWITCH KEYBOARD	

H1 H3 S

	REF. NO.	PART NO.	DESCRIPTION	VALUES		
H1						
	*	**A-1401-060-A**	**H1 BOARD, MOUNTED**			
		CAPACITOR				
	C9101	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
		CONNECTOR				
*	CN9101	1-564-508-11	PLUG,CONNECTOR	5P		
*	CN9102	1-564-506-11	PLUG,CONNECTOR	3P		
		DIODE				
	D9101	8-719-053-43	DIODE SLR-325VCT31			
	D9102	8-719-053-43	DIODE SLR-325VCT31			
		IC				
	IC9101	8-719-066-43	DIODE GP1U28Y			
		RESISTOR				
	R9101	1-216-833-11	METAL CHIP	10K	5%	1/10W
	R9102	1-216-809-11	METAL CHIP	100	5%	1/10W
	R9103	1-216-813-11	METAL CHIP	220	5%	1/10W
	R9104	1-216-813-11	METAL CHIP	220	5%	1/10W
		SWITCH				
	S9101	1-571-532-21	SWITCH TACTILE			
H3						
	*	**A-1401-061-A**	**H3 BOARD, MOUNTED**			
		CAPACITOR				
	C9301	1-126-964-11	ELECT	10µF	20%	50V
	C9302	1-126-964-11	ELECT	10µF	20%	50V
	C9303	1-126-959-11	ELECT	0.47µF	20%	50V
	C9304	1-126-959-11	ELECT	0.47µF	20%	50V
	C9305	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
		CONNECTOR				
*	CN9301	1-564-526-11	PLUG,CONNECTOR	11P		
		DIODE				
	D9301	8-719-110-17	DIODE RD10ES-T1B			
	D9302	8-719-110-17	DIODE RD10ES-T1B			
	D9303	8-719-110-17	DIODE RD10ES-T1B			
	D9304	8-719-110-17	DIODE RD10ES-T1B			
	D9305	8-719-110-17	DIODE RD10ES-T1B			
	D9306	8-719-110-17	DIODE RD10ES-T1B			
		JACK				
	J9301	1-565-929-11	TERMINAL BLOCK, S	3P		
		RESISTOR				
	R9301	1-216-821-11	METAL CHIP	1K	5%	1/10W
	R9302	1-216-853-11	METAL CHIP	470K	5%	1/10W
	R9303	1-216-853-11	METAL CHIP	470K	5%	1/10W
	R9304	1-218-285-11	METAL CHIP	75	5%	1/10W
	R9305	1-218-285-11	METAL CHIP	75	5%	1/10W
	R9306	1-218-285-11	METAL CHIP	75	5%	1/10W
S						
	*	**A-1391-148-A**	**S BOARD, MOUNTED**			
		CONNECTOR				
*	CN3001	1-564-506-11	PLUG,CONNECTOR	3P		
		DIODE				
	D3001	8-719-109-88	DIODE RD5.6ES-T1B			
		SWITCH				
	S3002	1-756-063-21	BATTERY, SOLAR			

REF. NO.	PART NO.	DESCRIPTION	VALUES

ACCESSORIES AND PACKING

	4-041-426-01	BAG, PROTECTION (KP-51WS500 ONLY)
	4-076-420-01	BAG, PROTECTION KP-57WS500/65WS500 ONLY)
	4-089-129-01	CARTON, INDIVIDUAL (KP-65WS500 ONLY)
	4-090-265-01	CARTON, INDIVIDUAL (KP-51WS500 ONLY)
	4-090-266-01	CARTON, INDIVIDUAL (KP-57WS500 ONLY)
	4-081-684-01	CUSHION, UPPER (KP-51WS500 ONLY)
	4-081-685-01	CUSHION, LOWER (KP-51WS500 ONLY)
	4-081-710-01	CUSHION, UPPER (KP-57WS500 ONLY)
	4-081-711-01	CUSHION, LOWER (KP-57WS500 ONLY)
	4-089-127-01	CUSHION, UPPER (KP-65WS500 ONLY)
	4-089-128-01	CUSHION, LOWER (KP-65WS500 ONLY)
	4-088-847-11	MANUAL, INSTRUCTION (ENGLISH)
	4-088-847-21	MANUAL, INSTRUCTION (FRENCH)
	4-042-463-01	SHEET, PROTECTION
	4-081-682-01	TRAY (KP-51WS500 ONLY)
	4-081-709-01	TRAY (KP-57WS500 ONLY)
	4-088-448-01	TRAY (KP-65WS500 ONLY)

REMOTE COMMANDER

	1-476-864-11	REMOTE COMMANDER (RM-Y909)
	4-081-888-01	BATTERY COVER (FOR RM-Y909)

REF. NO.	PART NO.	DESCRIPTION	VALUES

Sony Corporation
Sony Technology Center
Technical Services
Service Promotion Department

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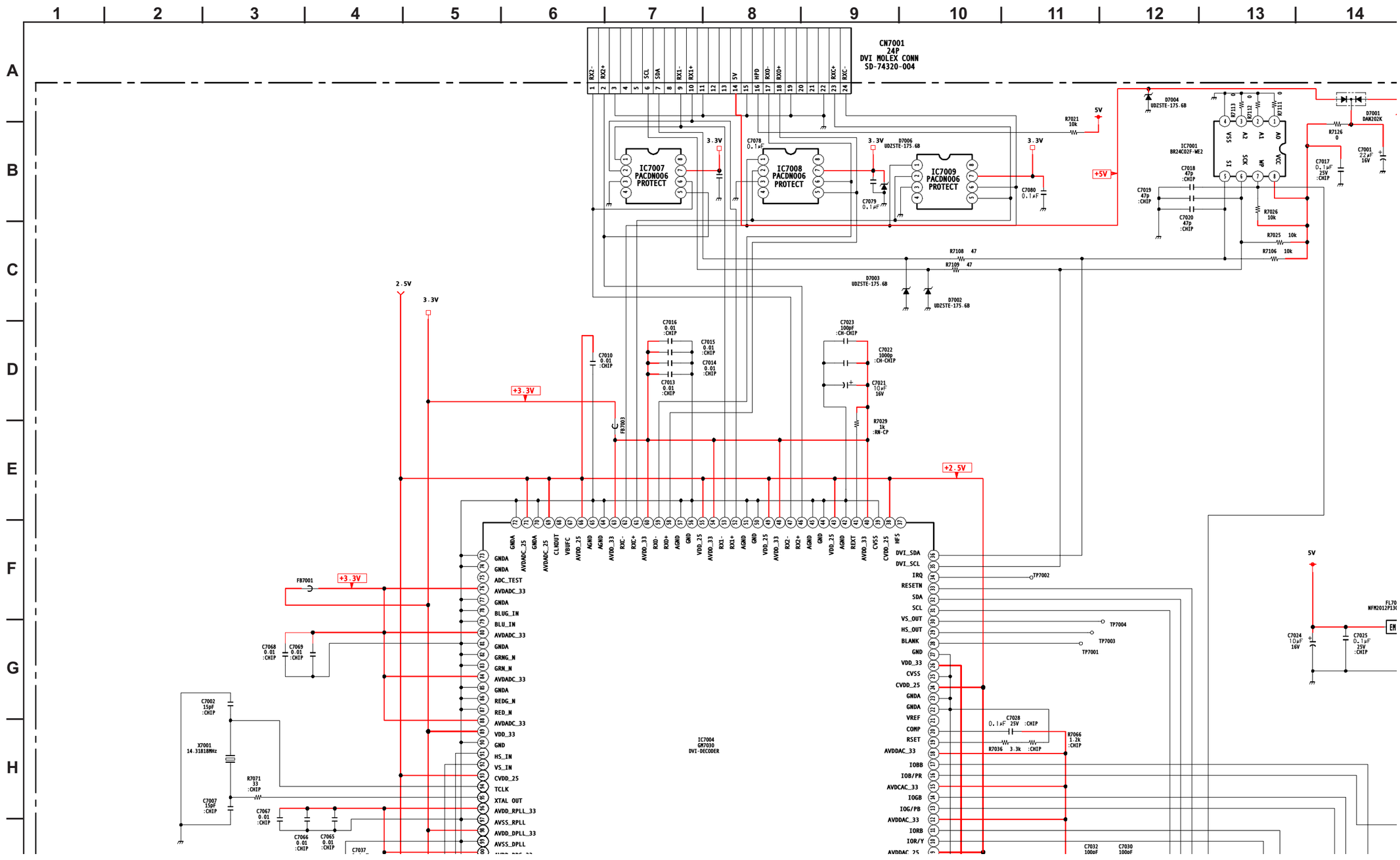
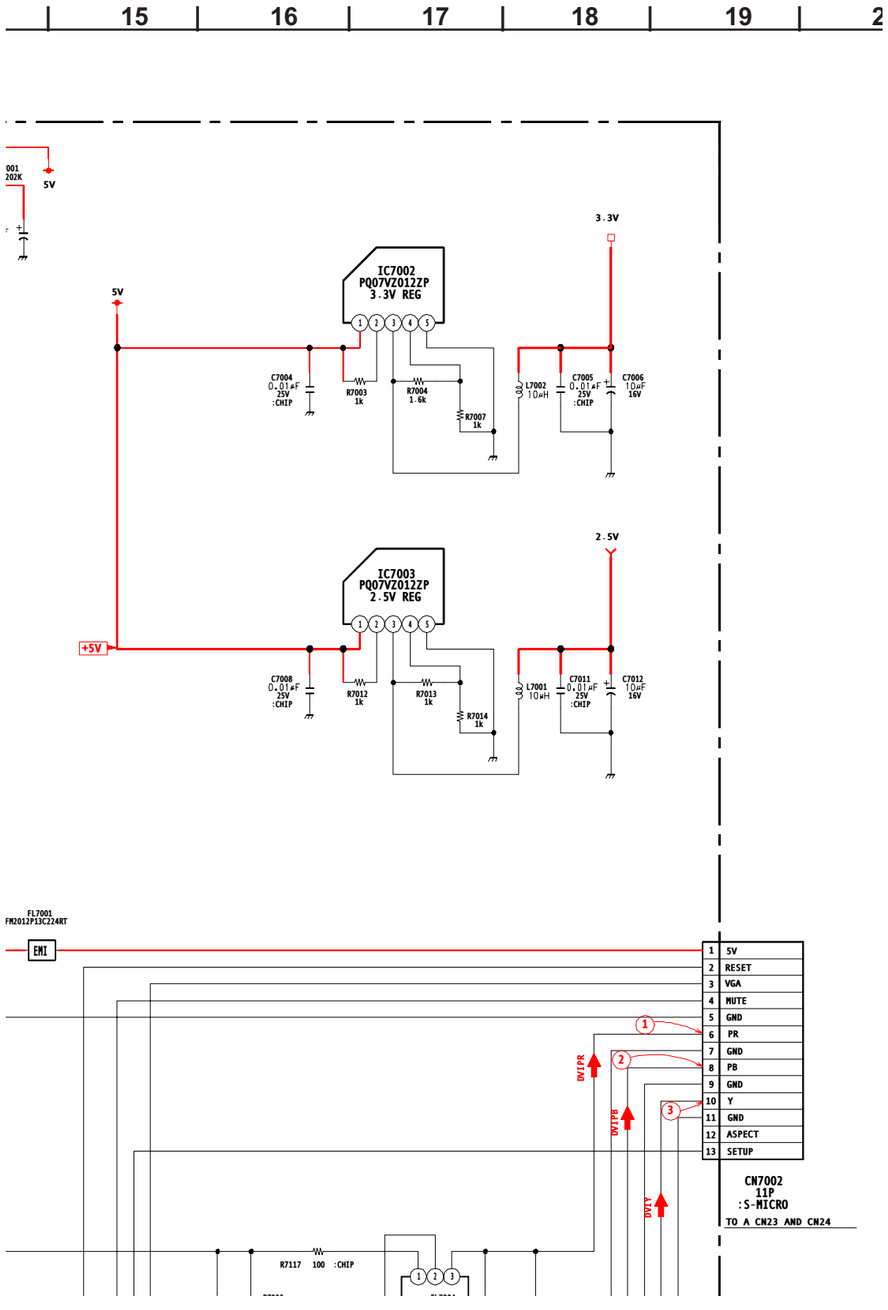
9-965-932-07

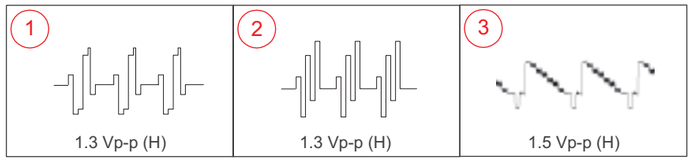
UD BOARD SCHEMATIC DIAGRAM The UD board is not field repairable. If service is required, use the following part number to order a complete replacement board.

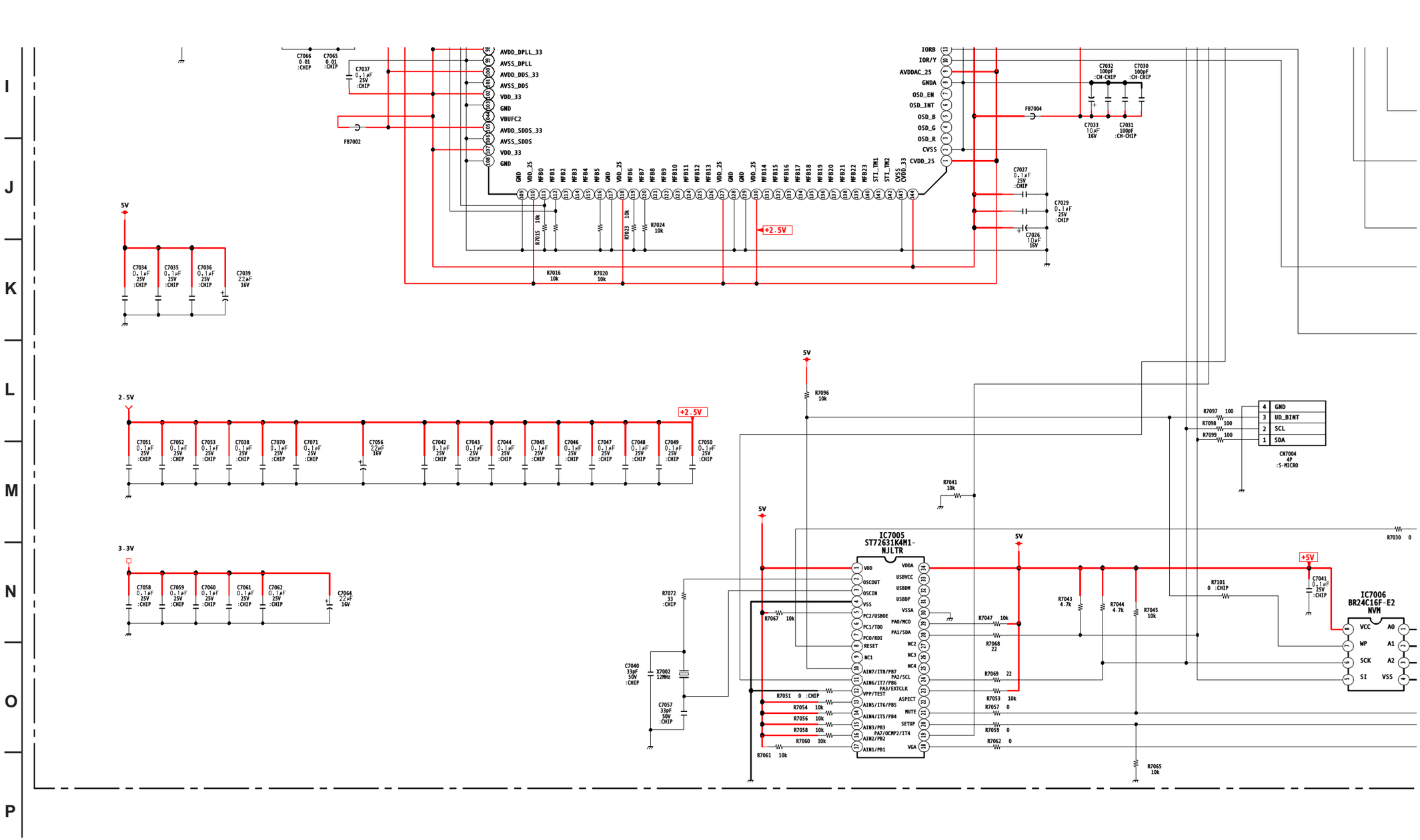
A-1300-324-A UD Board, Complete

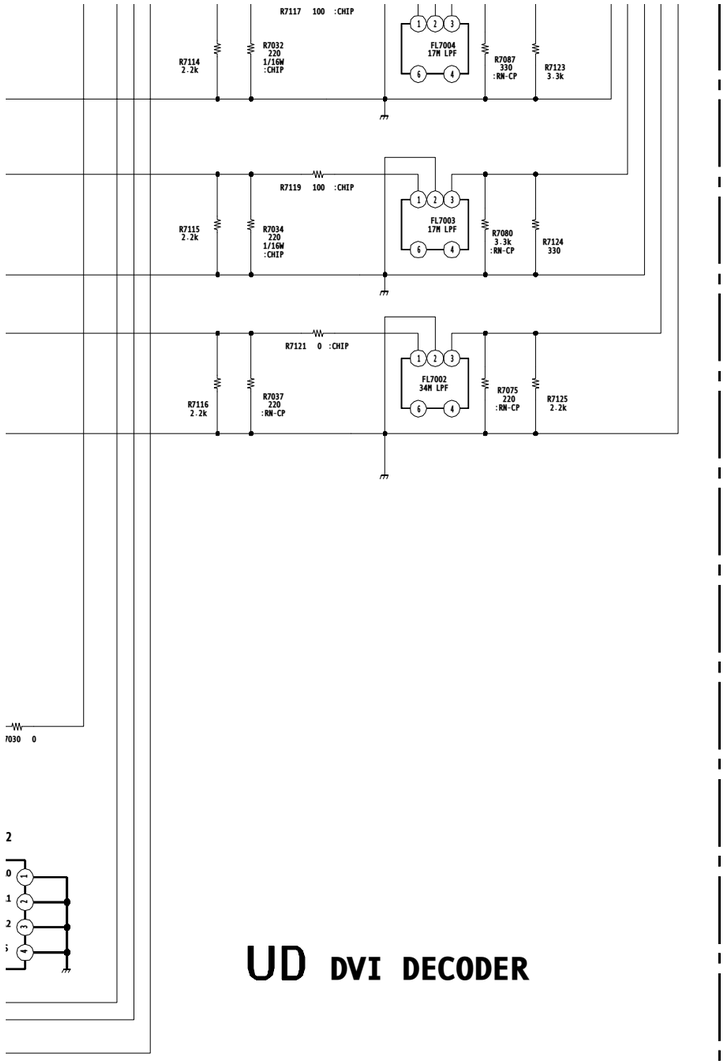




UD BOARD WAVEFORMS

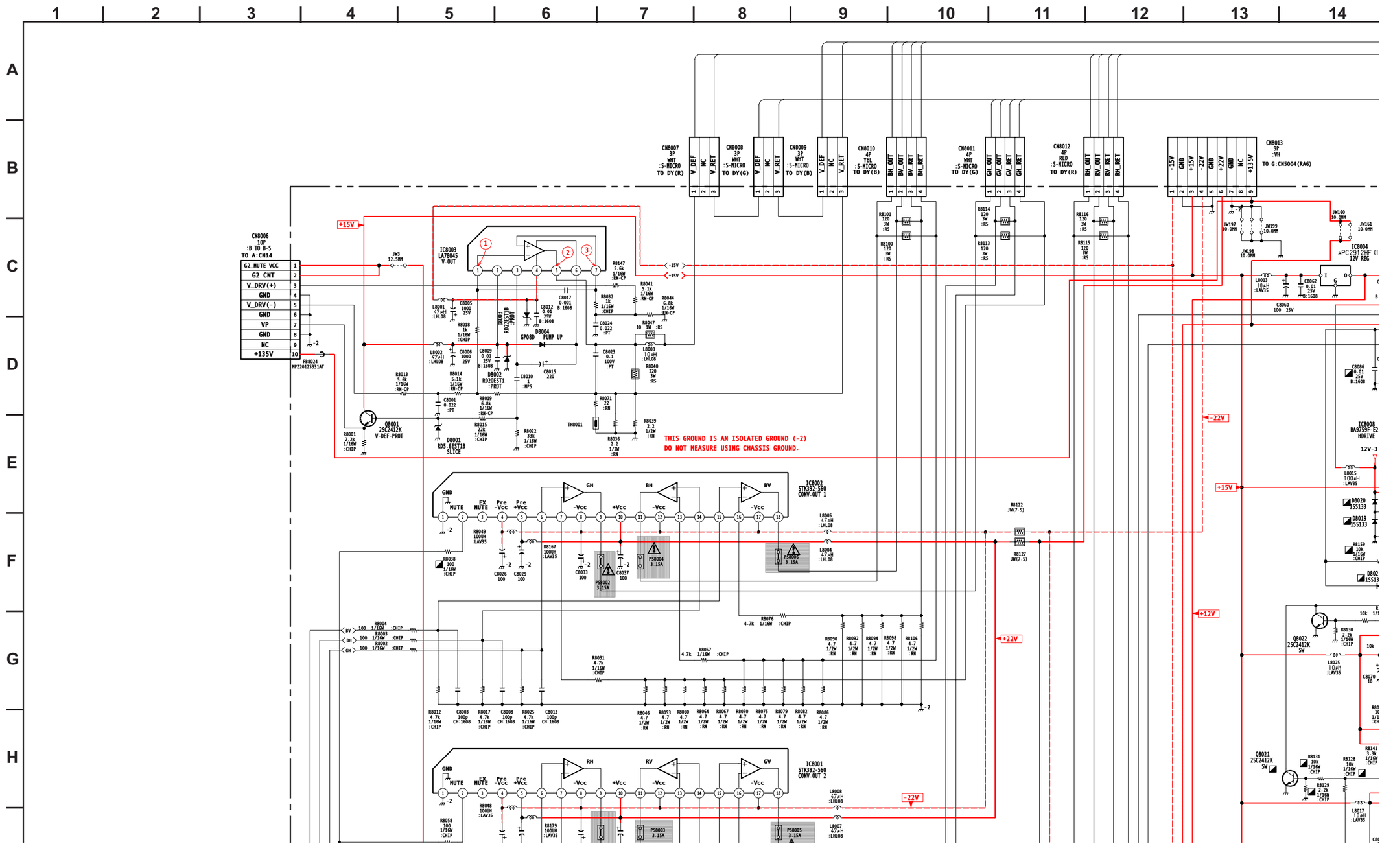



AVDD_DPLL_33
AVSS_DPLL
AVDD_DDS_33
AVSS_DDS
VDD_33
GND
VBUFC2
AVDD_SDDS_33
AVSS_SDDS
VDD_33
GND
IORB
IOR/Y
AVDDAC_25
GNDA
OSD_EN
OSD_INT
OSD_B
OSD_G
OSD_R
CVSS
CVDD_25
FB7002
FB7004
+2.5V
5V
2.5V
3.3V
+5V
IC7005
ST72631K4M1-
NJLTR
IC7006
BR24C16F-E2
NVM
X7002
12MHz
CN7004
4P
:S-MICRO
GND
UD_BINT
SCL
SDA



9-965-932-01<RA6>UD

D BOARD SCHEMATIC DIAGRAM



15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25

CN8015 2P :LARGE

CN8016 4P MMT :S-MICRO TO HV BLOCK

+12V +12V HV REG GND

HV BLOCK

HV (R) TO PICTURE TUBE R
HV (G) TO PICTURE TUBE G
HV (B) TO PICTURE TUBE B

+135V

12V

IC8008 A5959F-E2 HDRIVE

IC8007 NJM2903

IC8006 NJM2903

T8004 :LOT

T8005 NX-4006T/X :FBT

Q8035 2SJ585LS-CC11 SW

Q8037 2SC2412K AMP

Q8036 2SA1037AK AMP

Q8032 2SC2412K BUFF

Q8005 2SA1037AK BUFF

Q8029 2SC2412K SW

Q8038 IMB12-140

D8034 ERC07-15L DAMPER1

D8035 ERC07-15L DAMPER1

D8039 RGP02-17PKG23

D8037 D2L20U-F

D8031 RD18ES71B :PROT

D8036 RD15ES71B

D8028 RD15ES71B

D8014 RD5.1ES71B

D8016 1SS133

D8007 1SS133

D8008 1SS133

D8015 1SS133

D8023 1SS133

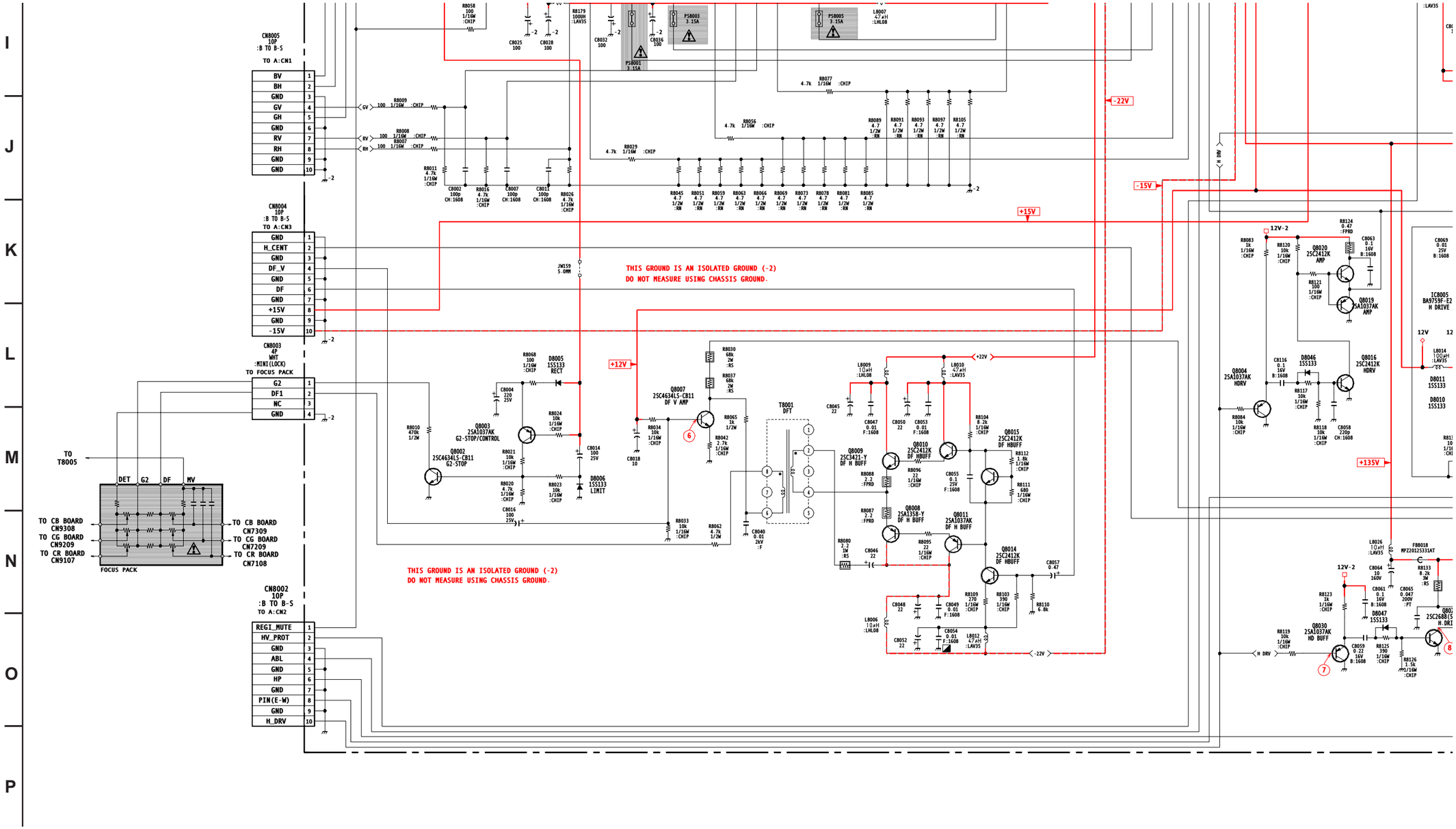
D8009 1SS133

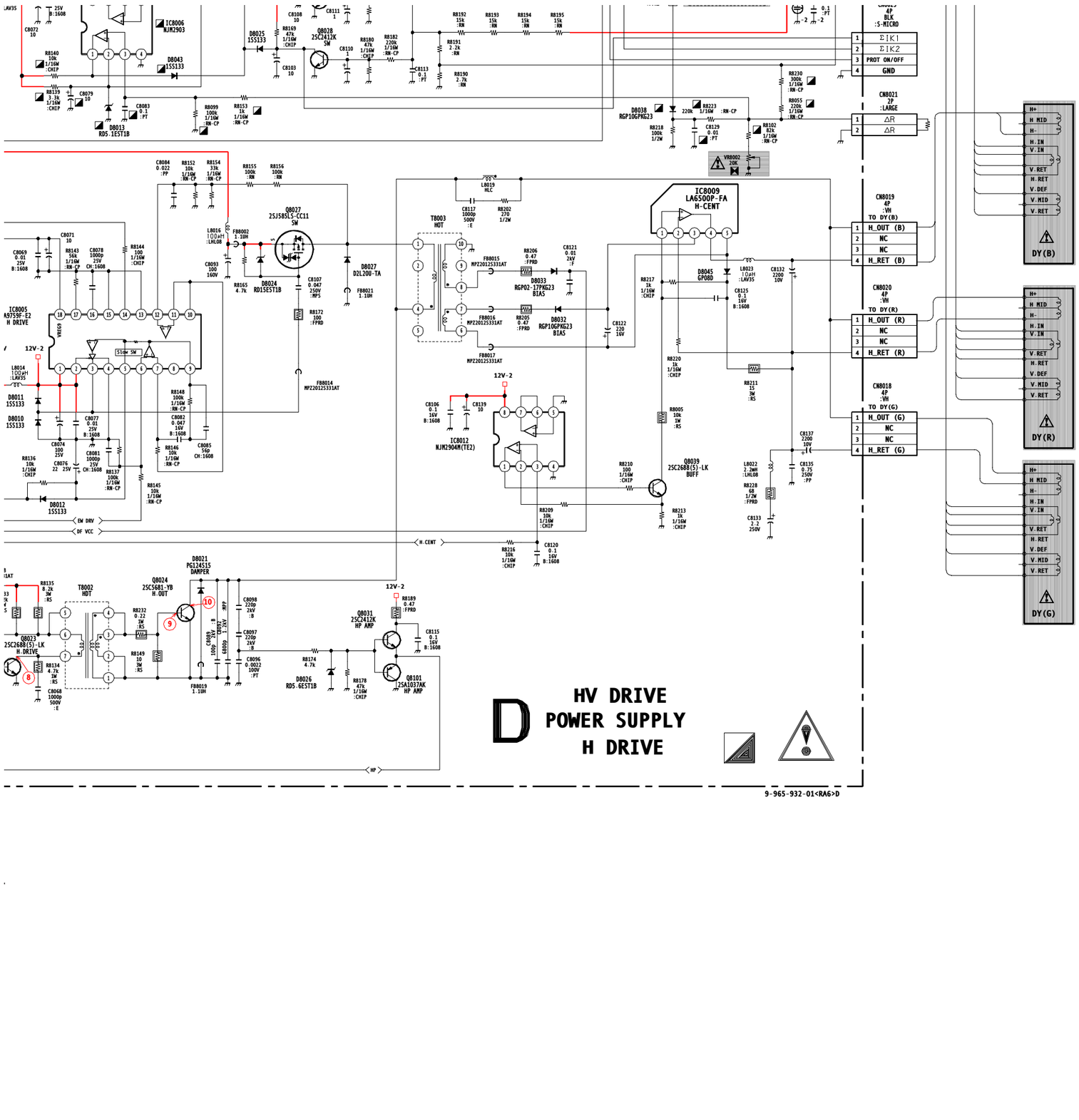
D8022 1SS133

CN8022 7P WHT :S-MICRO TO CB:CN7304

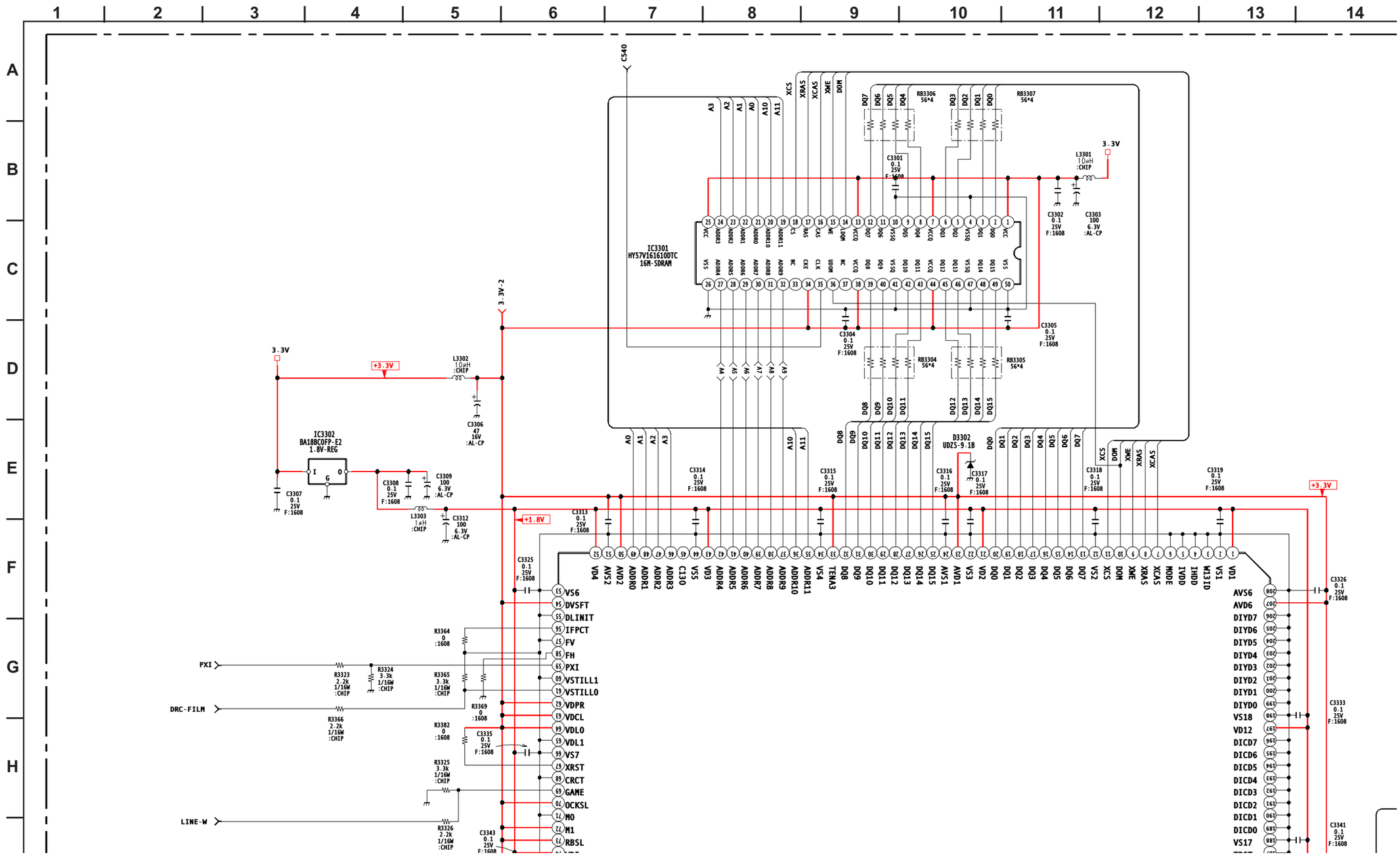
1	200V
2	NC
3	GND
4	NC
5	NC
6	H(+)
7	H(-)

CN8023 4P BLK :S-MICRO


CN8005
10P
:B TO B-S
TO A:CN1
BV 1
BH 2
GND 3
GV 4
GH 5
GND 6
RV 7
RH 8
GND 9
GND 10
CN8004
10P
:B TO B-S
TO A:CN3
GND 1
H_CENT 2
GND 3
DF_V 4
GND 5
DF 6
GND 7
+15V 8
GND 9
-15V 10
CN8003
4P
NHT
:MINI(LOCK)
TO FOCUS PACK
G2 1
DF1 2
NC 3
GND 4
TO T8005
DET G2 DF MV
FOCUS PACK
TO CB BOARD CN9308
TO CG BOARD CN9209
TO CR BOARD CN9107
TO CB BOARD CN7309
TO CG BOARD CN7209
TO CR BOARD CN7108
CN8002
10P
:B TO B-S
TO A:CN2
REGI_MUTE 1
HV_PROT 2
GND 3
ABL 4
GND 5
HP 6
GND 7
PIN(E-W) 8
GND 9
H_DRV 10
THIS GROUND IS AN ISOLATED GROUND (-2)
DO NOT MEASURE USING CHASSIS GROUND.
THIS GROUND IS AN ISOLATED GROUND (-2)
DO NOT MEASURE USING CHASSIS GROUND.
-22V
-15V
+15V
+12V
+22V
+135V
12V-2
H DRV
T8001
DFT
Q8007
2SC4634LS-CB11
DF V AMP
Q8003
2SA1037AK
G2-STOP/CONTROL
Q8002
2SC4634LS-CB11
G2-STOP
Q8009
2SC3421-Y
DF H BUFF
Q8010
2SC2412K
DF HBUFF
Q8008
2SA1358-Y
DF H BUFF
Q8011
2SA1037AK
DF H BUFF
Q8014
2SC2412K
DF HBUFF
Q8015
2SC2412K
DF HBUFF
Q8020
2SC2412K
AMP
Q8019
2SA1037AK
AMP
Q8004
2SA1037AK
HDRV
Q8016
2SC2412K
HDRV
Q8030
2SA1037AK
HD BUFF
IC8005
BA9759F-E2
H DRIVE
D8005
1SS133
RECT
D8006
1SS133
LIMIT
D8046
1SS133
D8047
1SS133
D8011
1SS133
D8010
1SS133
PS8001
3.15A
PS8003
3.15A
PS8005
3.15A
L8007
4.7 uH
:LHL08
L8009
10 uH
:LHL08
L8010
4.7 uH
:LAV35
L8006
10 uH
:LHL08
L8012
47 uH
:LAV35
L8026
10 uH
:LAV35
FB8018
MPZ2012S331AT
JW159
5.0MM

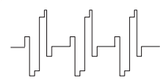
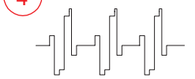

IC8006 NJM2903
Q8028 2SC2412K SW
Q8027 2SJ585LS-CC11 SW
IC8009 LA6500P-FA H-CENT
T8003 HOT
T8002 HDT
IC8005 A9759F-E2 H DRIVE
IC8012 NJM2904M(TE2)
Q8039 2SC2688(5)-LK BUFF
Q8023 2SC2688(5)-LK H.DRIVE
Q8024 2SC5681-YB H.OUT
Q8031 2SC2412K HP AMP
Q8101 2SA1037AK HP AMP
D8021 PG124515 DAMPER
D8045 GP08D
D8033 RGP02-17PKG23 BIAS
D8032 RGP10GPKG23 BIAS
D8038 RGP10GPKG23
D8027 D2L20U-TA
D8026 RD5.6EST1B
D8024 RD15EST1B
D8013 RD5.1EST1B
CN8021 2P :LARGE
CN8019 4P :VH TO DY(B)
CN8020 4P :VH TO DY(R)
CN8018 4P :VH TO DY(G)
CN8017 4P BLK :5-MICRO
1 ΣIK1
2 ΣIK2
3 PROT ON/OFF
4 GND
1 ΔR
2 ΔR
1 H_OUT (B)
2 NC
3 NC
4 H_RET (B)
1 H_OUT (R)
2 NC
3 NC
4 H_RET (R)
1 H_OUT (G)
2 NC
3 NC
4 H_RET (G)
H+
H MID
H-
H.IN
V.IN
V.RET
H.RET
V.DEF
V.MID
V.RET
DY(B)
DY(R)
DY(G)
12V-2
Slow SW
EW DRV
DF VCC
H.CENT
HP
D HV DRIVE POWER SUPPLY H DRIVE
9-965-932-01<RA6>D

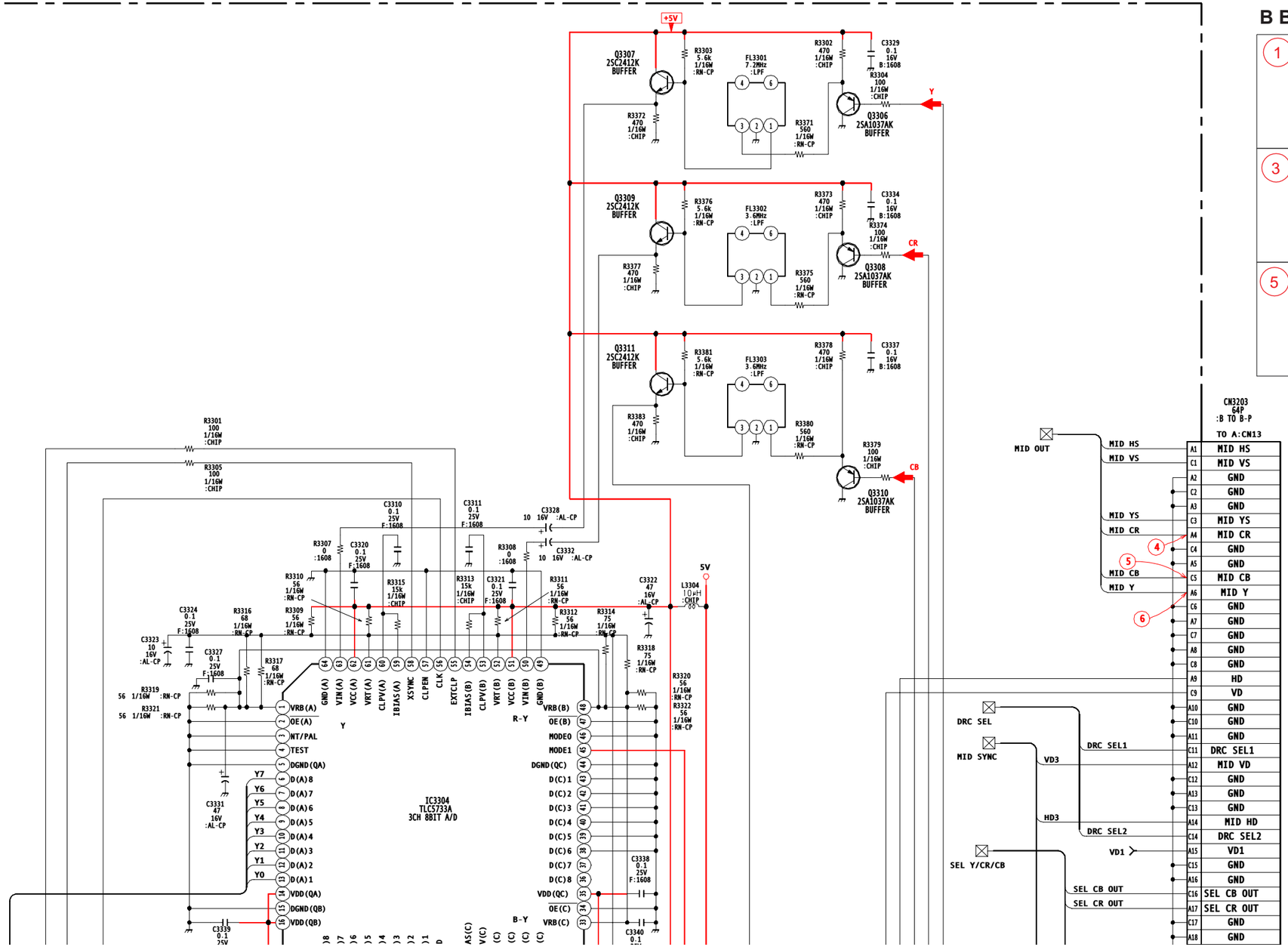
B BOARD SCHEMATIC DIAGRAM (1 OF 2) The B board is not field repairable. If service is required, use the following part number to order a complete replacement board.
A-1136-271-A B Board, Complete



15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25

B BOARD WAVEFORMS

1 1.5 Vp-p (H)	2  1.3 Vp-p (H)
3 1.1 Vp-p (H)	4  1.4 Vp-p (H)
5 1.2 Vp-p (H)	6 1.5 Vp-p (H)

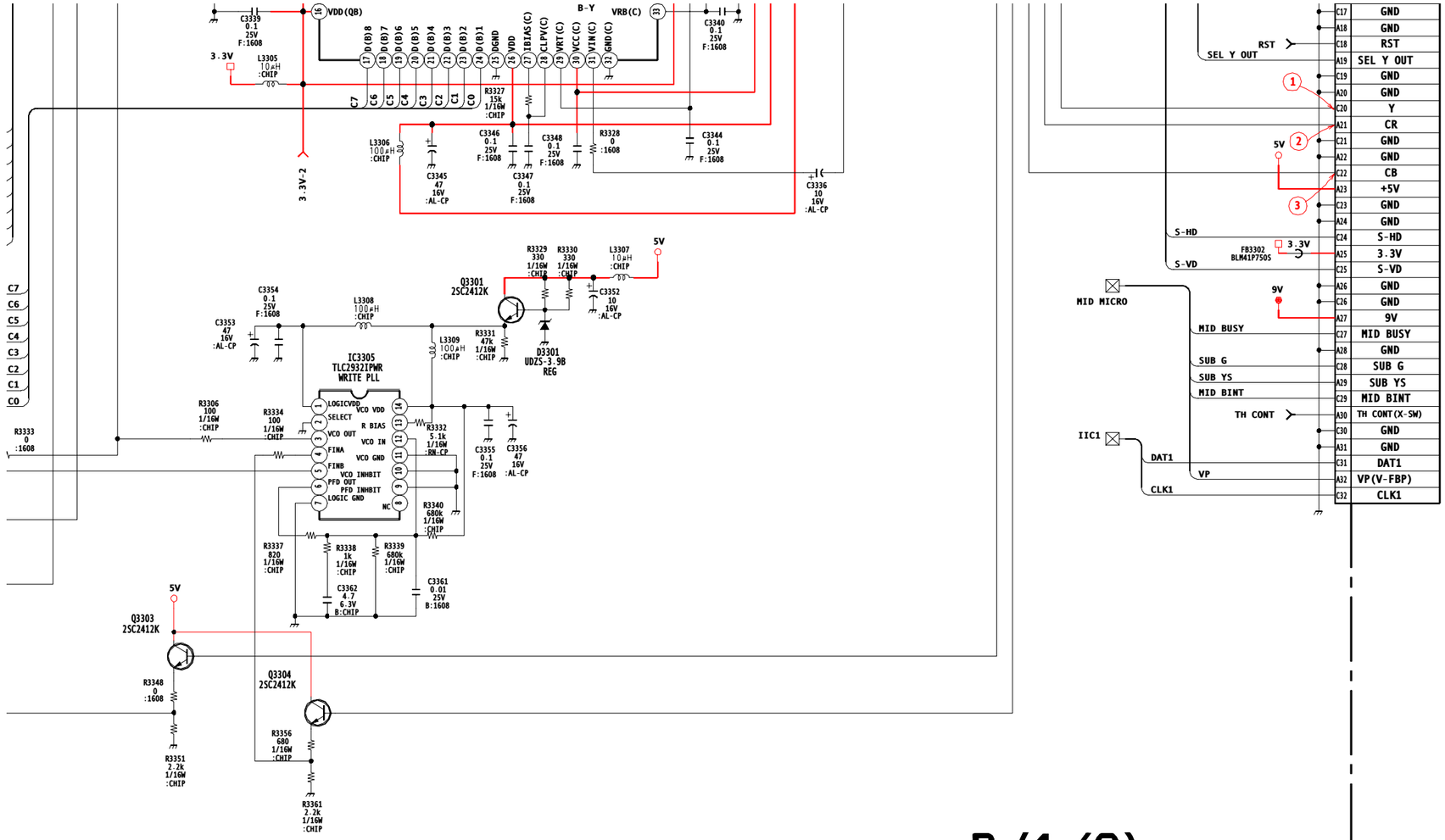


IC3303
CXD2095AQ
DRC-MF

IC3306
TLC2933IPWR
READ PLL

Q3302
2SC2412K

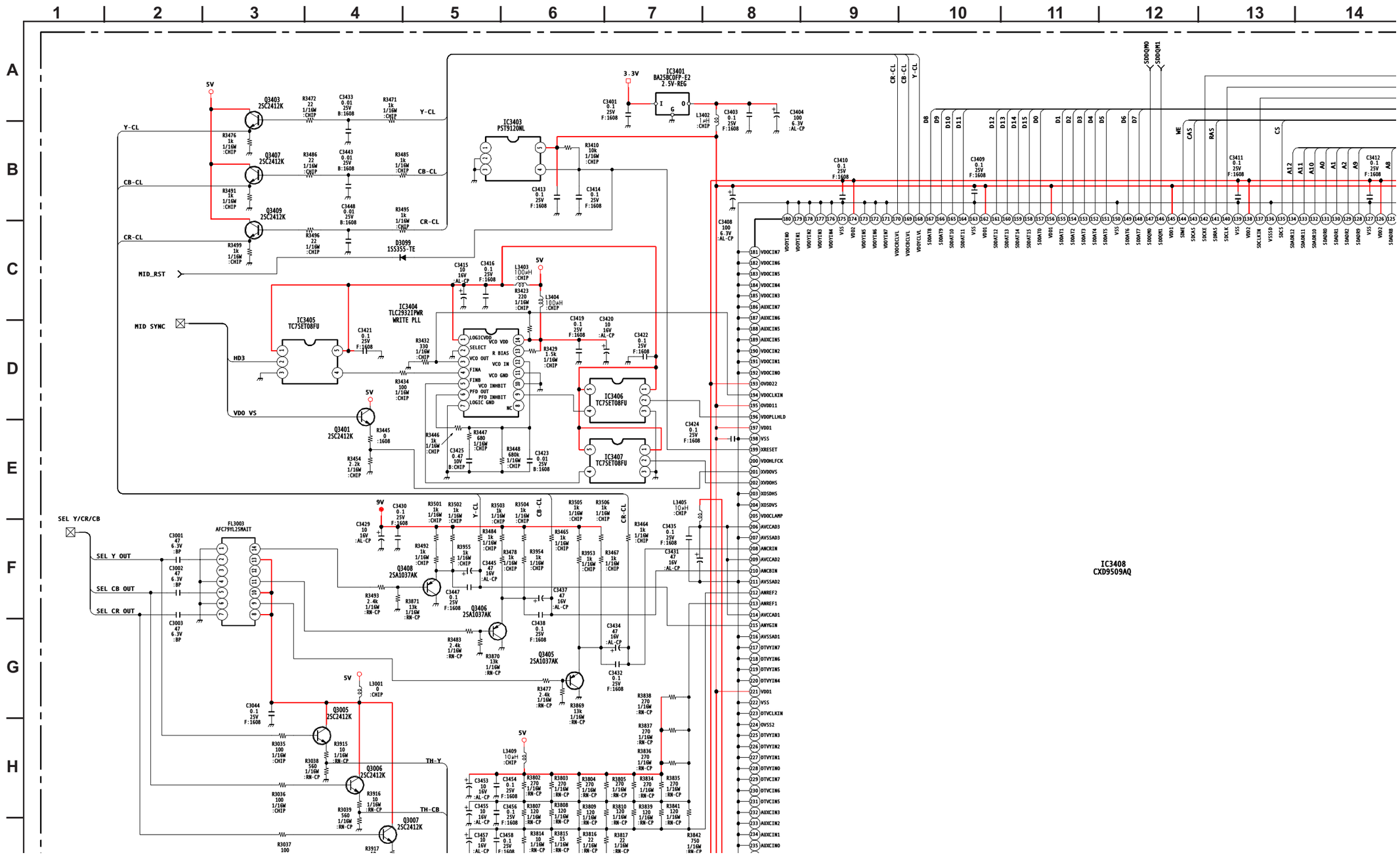
Q3305
2SA1037AK

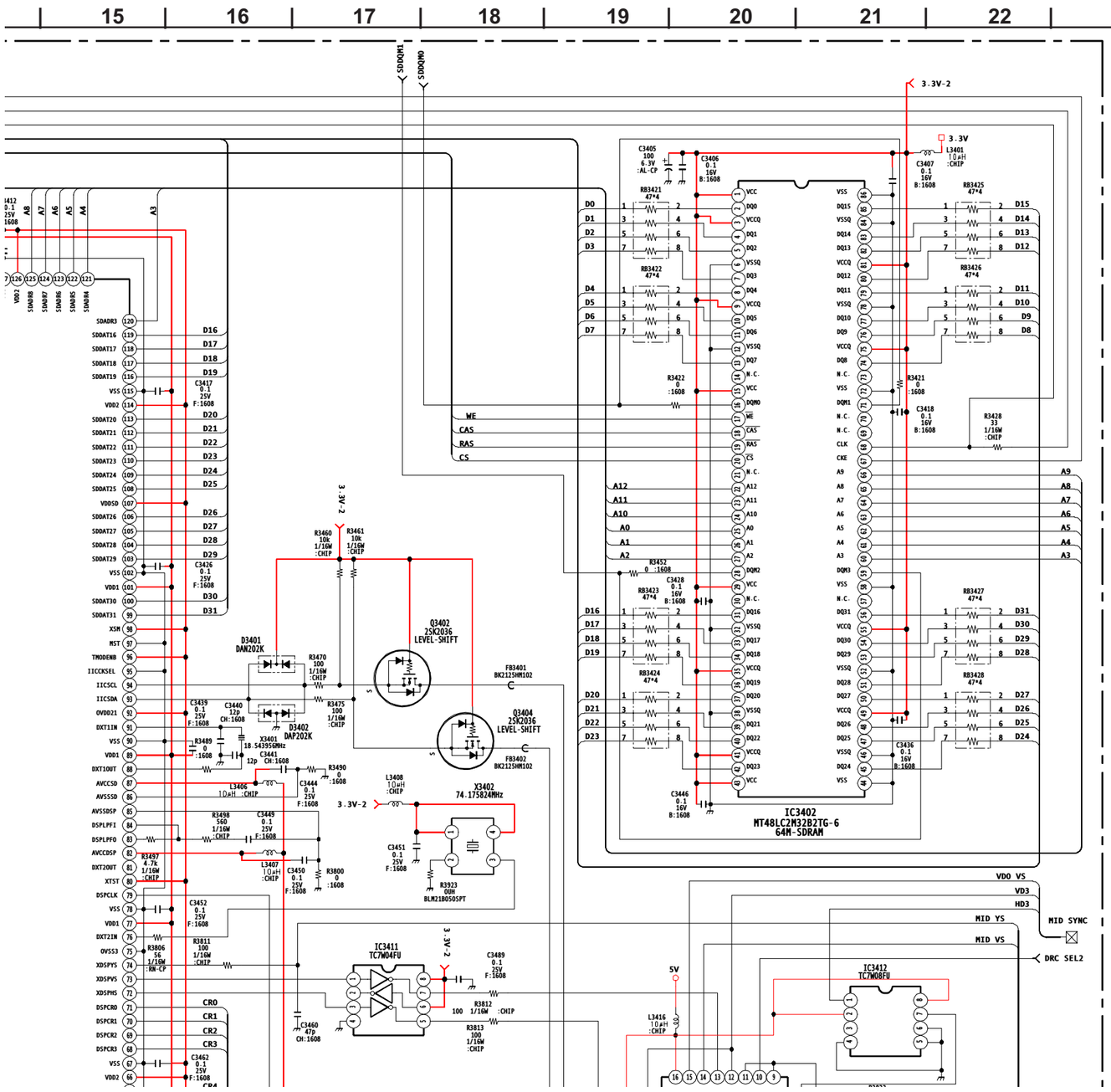

VDD(QB)
B-Y
VRB(C)
3.3V
3.3V-2
5V
IC3305
TLC2932IPWR
WRITE PLL
LOGICVDD
SELECT
VCO OUT
FINA
FINB
PFD OUT
LOGIC GND
VCO VDD
R BIAS
VCO IN
VCO GND
VCO INHBIT
PFD INHBIT
NC
Q3301
2SC2412K
D3301
UDZS-3.9B
REG
Q3303
2SC2412K
Q3304
2SC2412K
C7
C6
C5
C4
C3
C2
C1
C0
R3333
0
:1608
R3348
0
:1608
R3351
2.2k
1/16W
:CHIP
R3361
2.2k
1/16W
:CHIP
GND
RST
SEL Y OUT
Y
CR
CB
+5V
S-HD
3.3V
S-VD
9V
MID MICRO
MID BUSY
SUB G
SUB YS
MID BINT
TH CONT
IIC1
DAT1
VP
CLK1
FB3302
BLM41P750S
C17
C18
C19
C20
C21
C22
C23
C24
C25
C26
C27
C28
C29
C30
C31
C32
A17
A18
A19
A20
A21
A22
A23
A24
A25
A26
A27
A28
A29
A30
A31
A32
SUB YS
TH CONT(X-SW)
DAT1
VP(V-FBP)

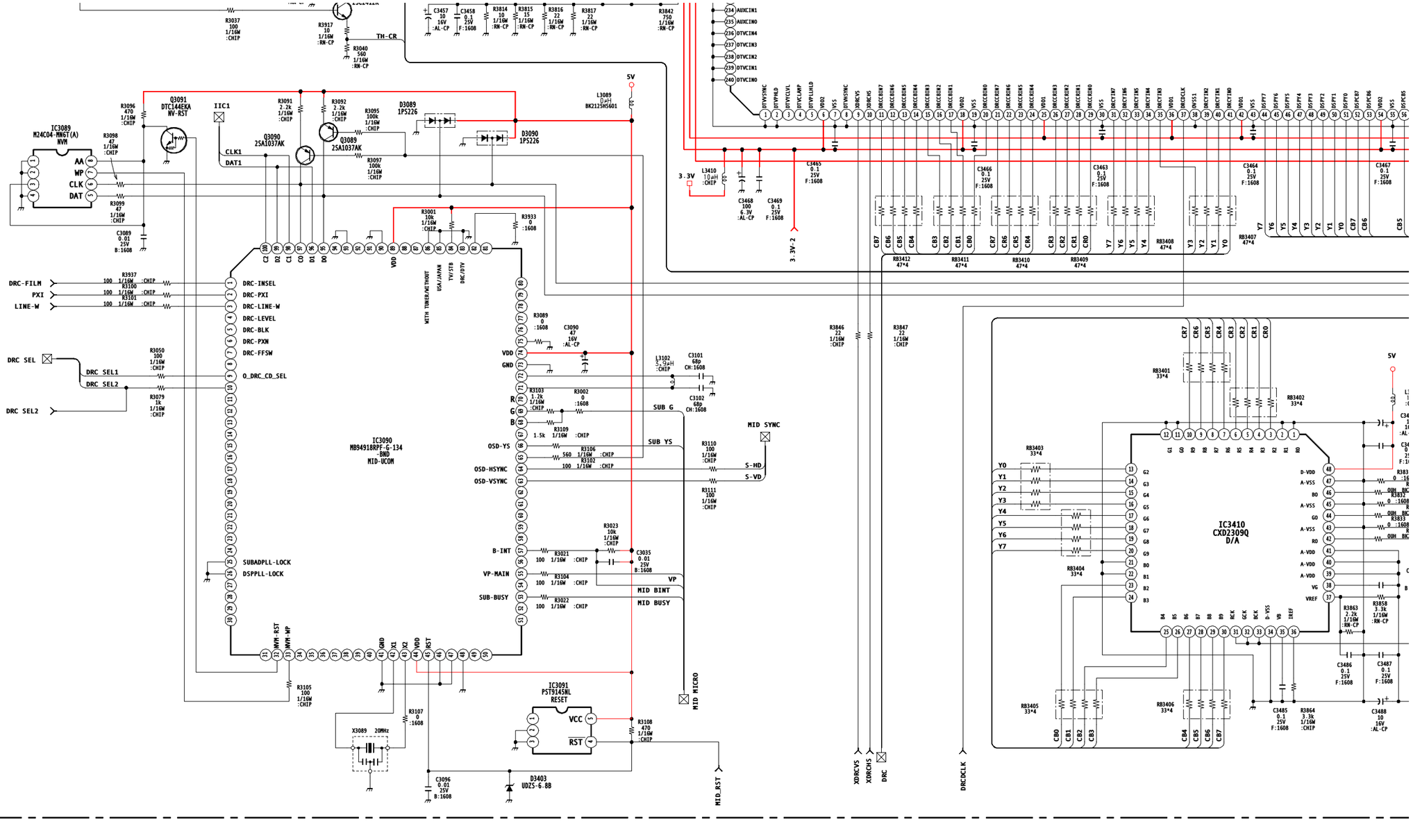
B (1/2)

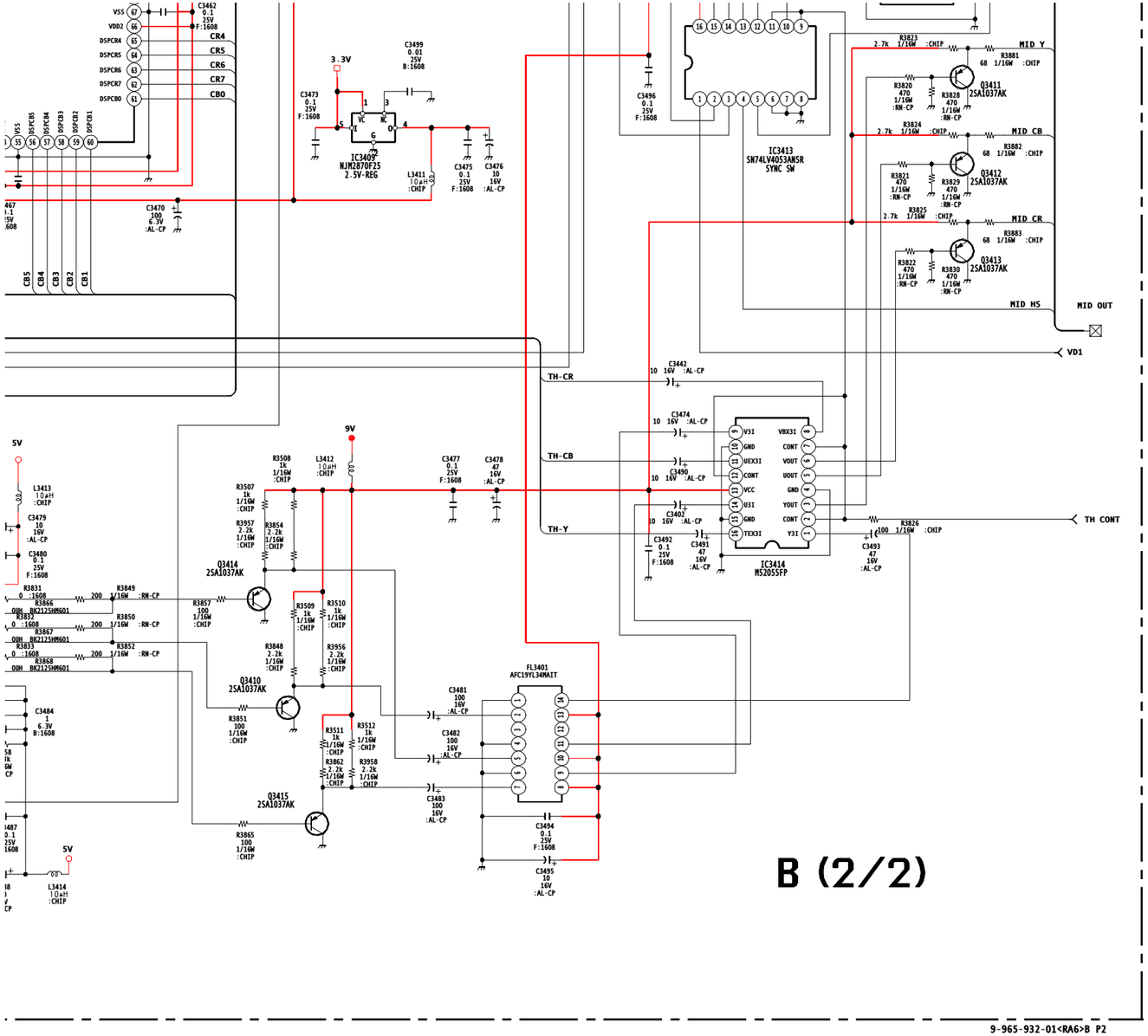
AD-DRC

B BOARD SCHEMATIC DIAGRAM (2 OF 2)




15
16
17
18
19
20
21
22
23
SDDQM1
SDDQM0
3.3V-2
3.3V
IC3402
MT48LC2M32B2TG-6
64M-SDRAM
IC3411
TC7W04FU
IC3412
TC7W08FU
Q3402
2SK2036
LEVEL-SHIFT
Q3404
2SK2036
LEVEL-SHIFT
D3401
DAN202K
D3402
DAP202K
X3401
18.543950MHz
X3402
74.175824MHz
WE
CAS
RAS
CS
CR0
CR1
CR2
CR3
5V
VDO VS
VD3
HD3
MID YS
MID VS
MID SYNC
DRC SEL2


IC3089
M24C04-MNGT(A)
NVM
Q3091
DTC144EKA
NV-RST
IIC1
Q3090
2SA1037AK
Q3089
2SA1037AK
D3089
1PS226
D3090
1PS226
L3089
0μH
BK2125HS601
3.3V
L3410
1.0μH
:CHIP
3.3V-2
5V
DRC-FILM
PXI
LINE-W
DRC SEL
DRC SEL1
DRC SEL2
DRC-INSEL
DRC-PXI
DRC-LINE-W
DRC-LEVEL
DRC-BLK
DRC-PXN
DRC-FFSW
O_DRC_CD_SEL
IC3090
MB94918RPF-G-134
-BND
MID-UCOM
SUB G
SUB Y
MID SYNC
S-HD
S-VD
OSD-YS
OSD-HSYNC
OSD-VSYNC
SUBADPLL-LOCK
DSPPLL-LOCK
B-INT
VP-MAIN
SUB-BUSY
VP
MID BINT
MID BUSY
MID MICRO
MID_RST
IC3091
PST9145NL
RESET
VCC
RST
X3089 20MHz
D3403
UDZS-6.8B
IC3410
CXD2309Q
D/A
XDRCV5
XDRCH5
DRC
DRCIOCLK



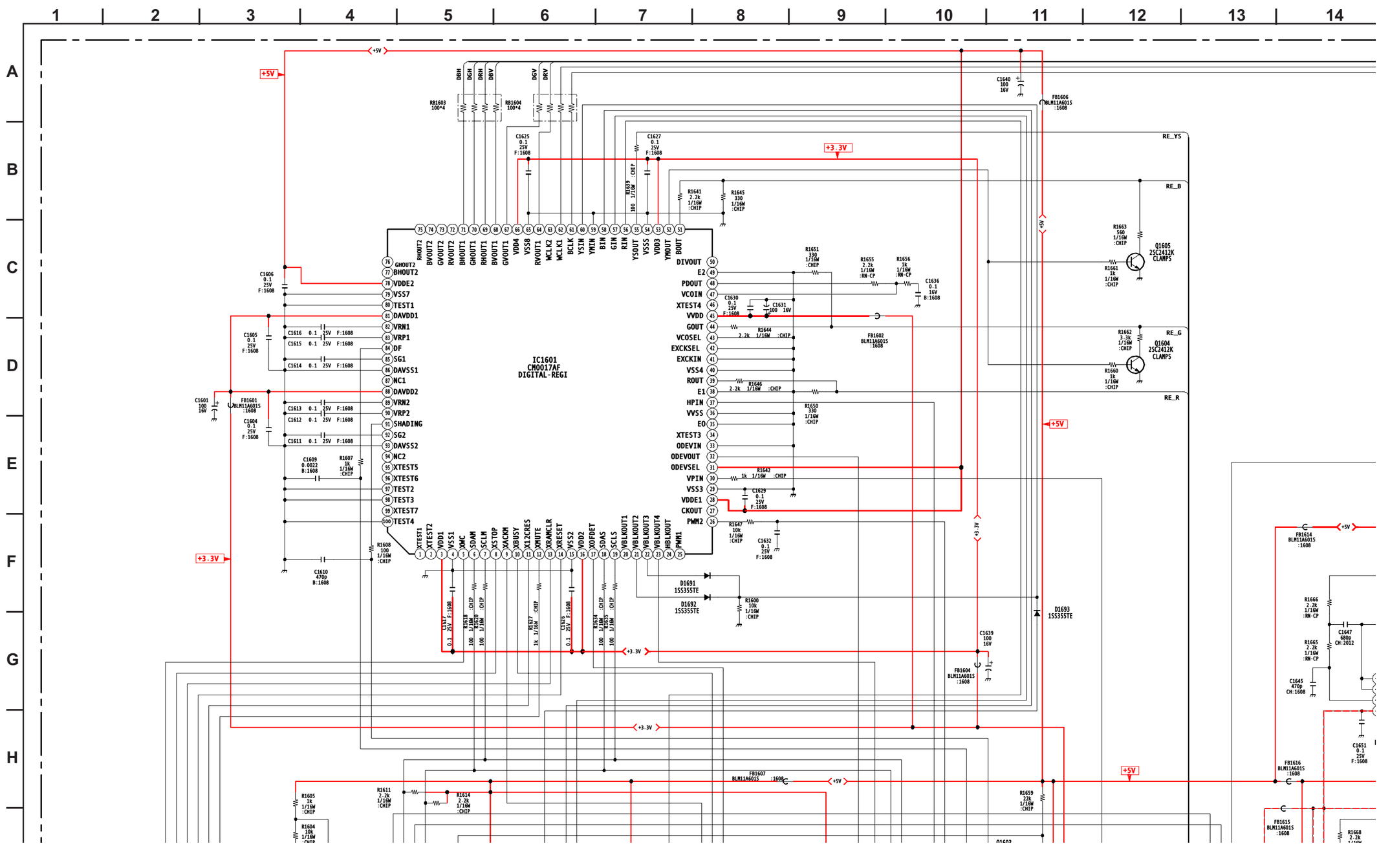
B (2/2)

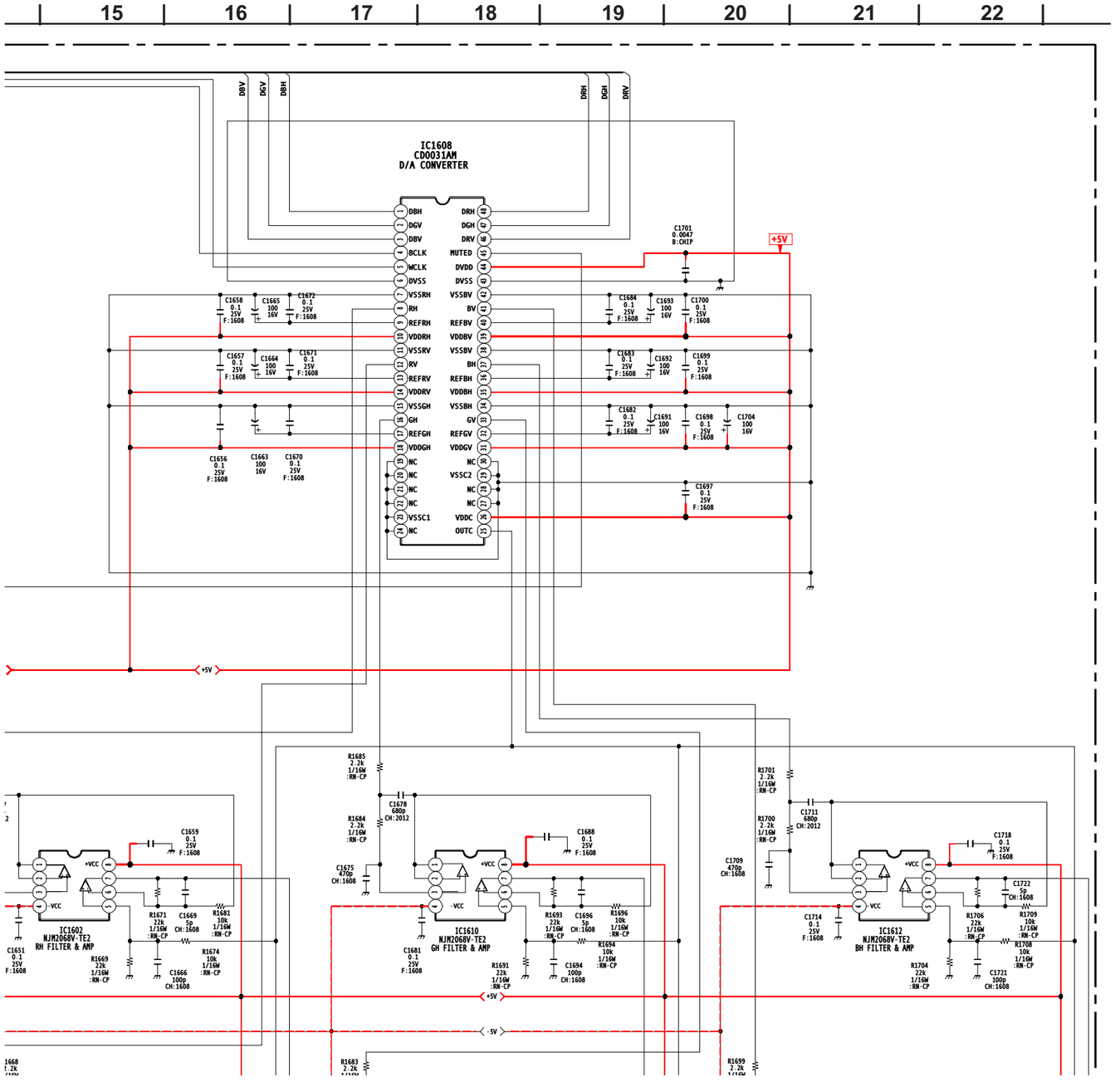
9-965-932-01<RA6>B P2

AD BOARD SCHEMATIC DIAGRAM

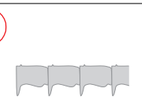
The AD board is not field repairable. If service is required, use the following part number to order a complete replacement board.

A-1299-523-A AD Board, Complete

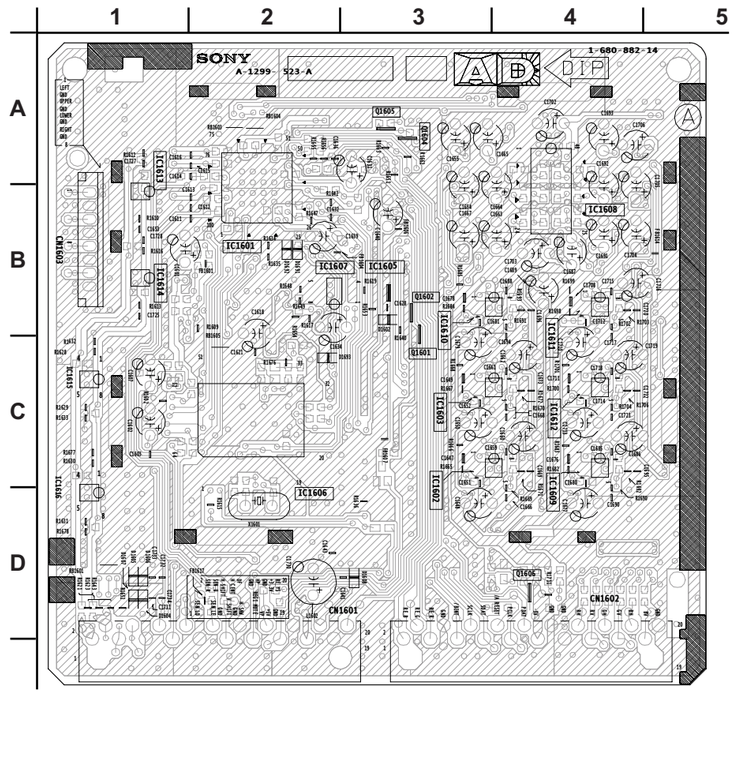


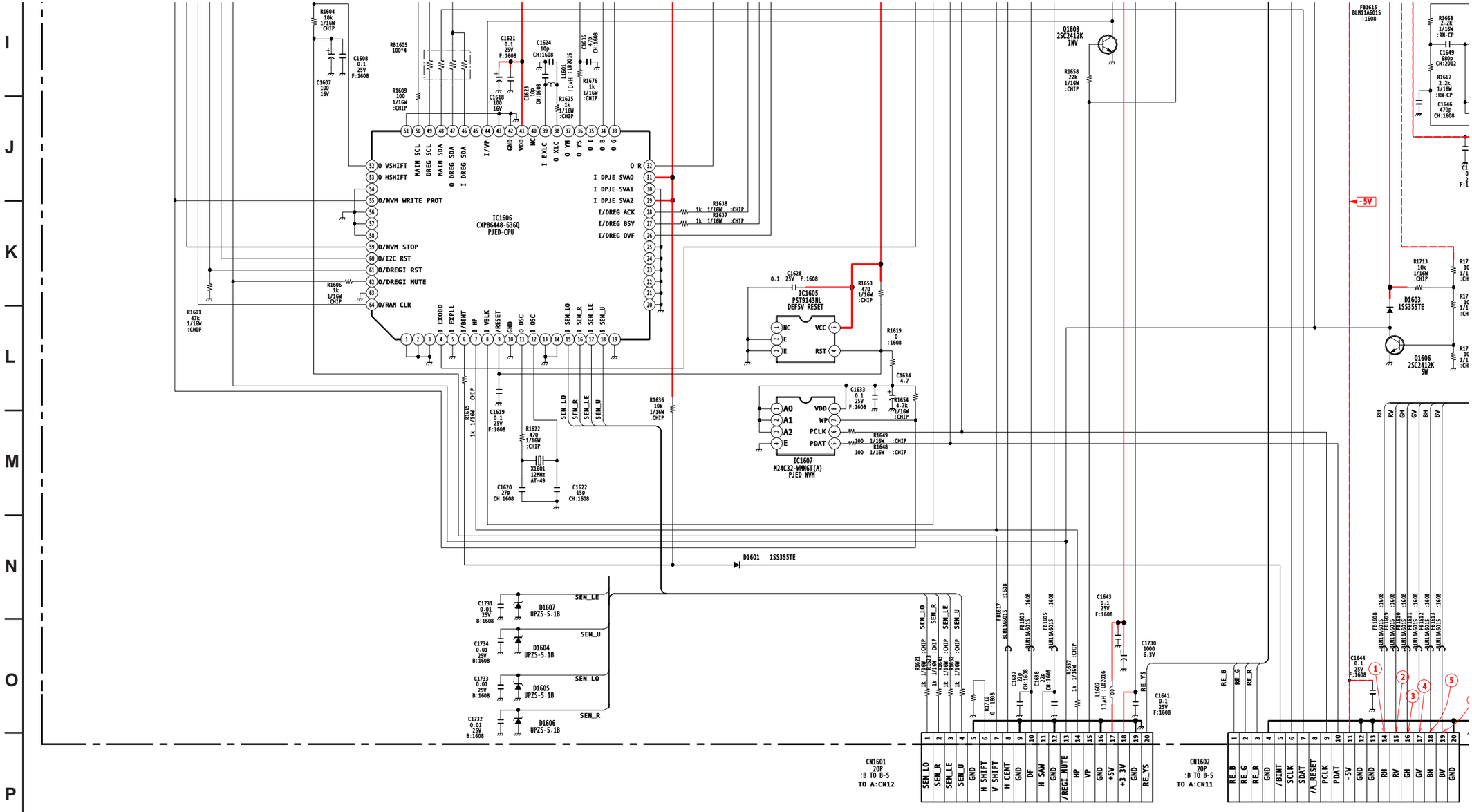


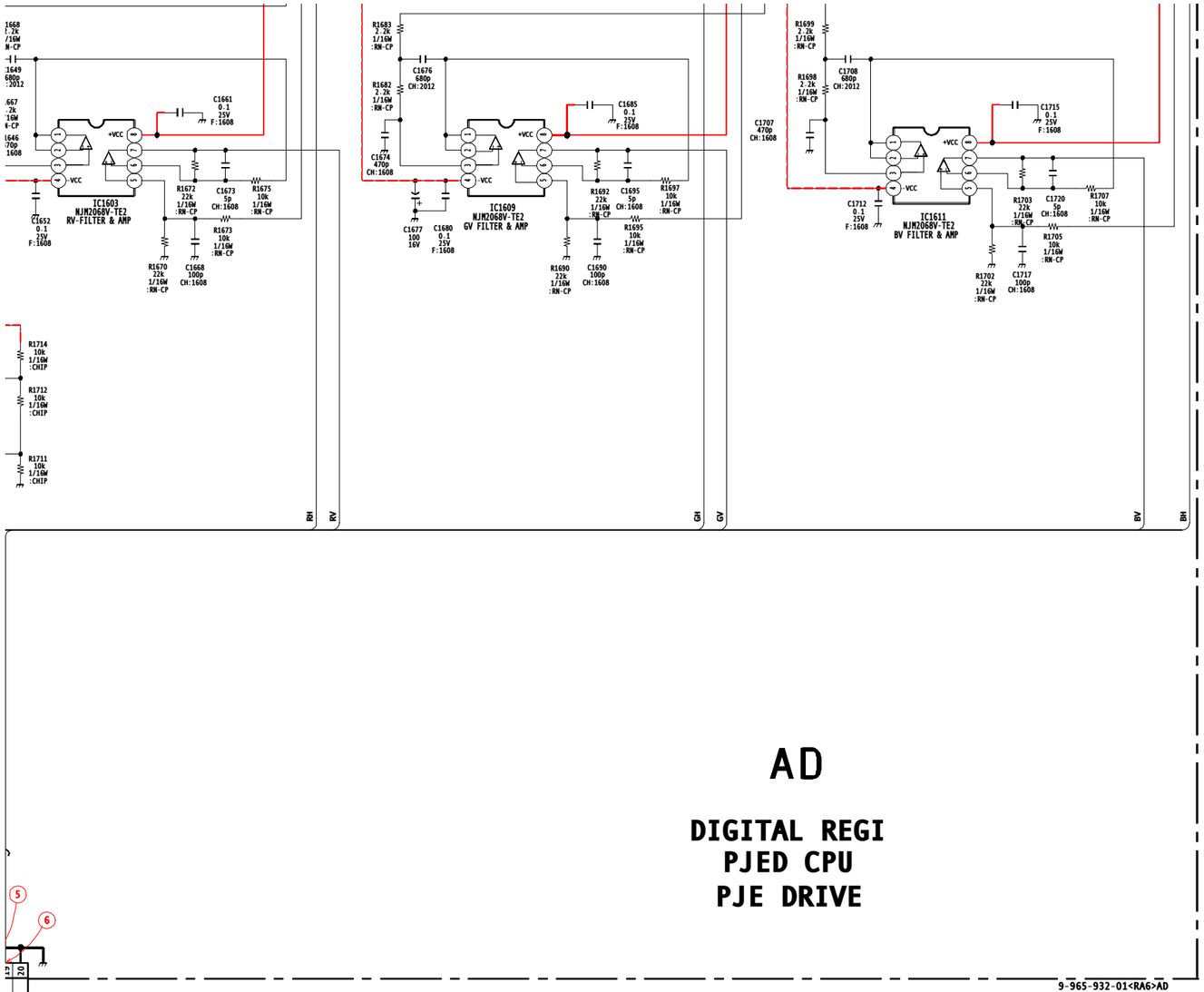
AD BOARD WAVEFORMS

1  2.1 Vp-p (V)	2 2.3 Vp-p (V)	3 2.1 Vp-p (V)
4 2.5 Vp-p (V)	5 2.0 Vp-p (V)	6 2.3 Vp-p (V)

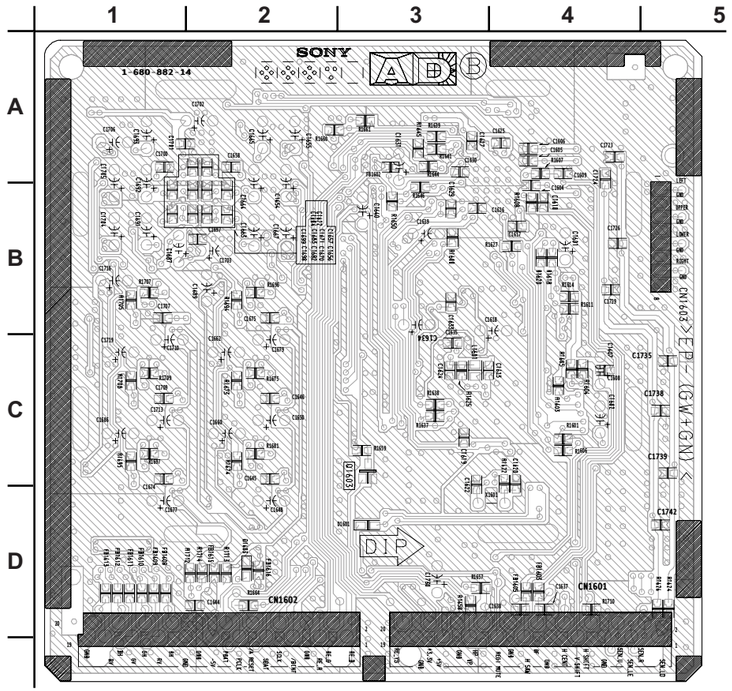
AD [DIGITAL REGI, PJED CPU, PJE DRIVE] [COMPONENT SIDE]



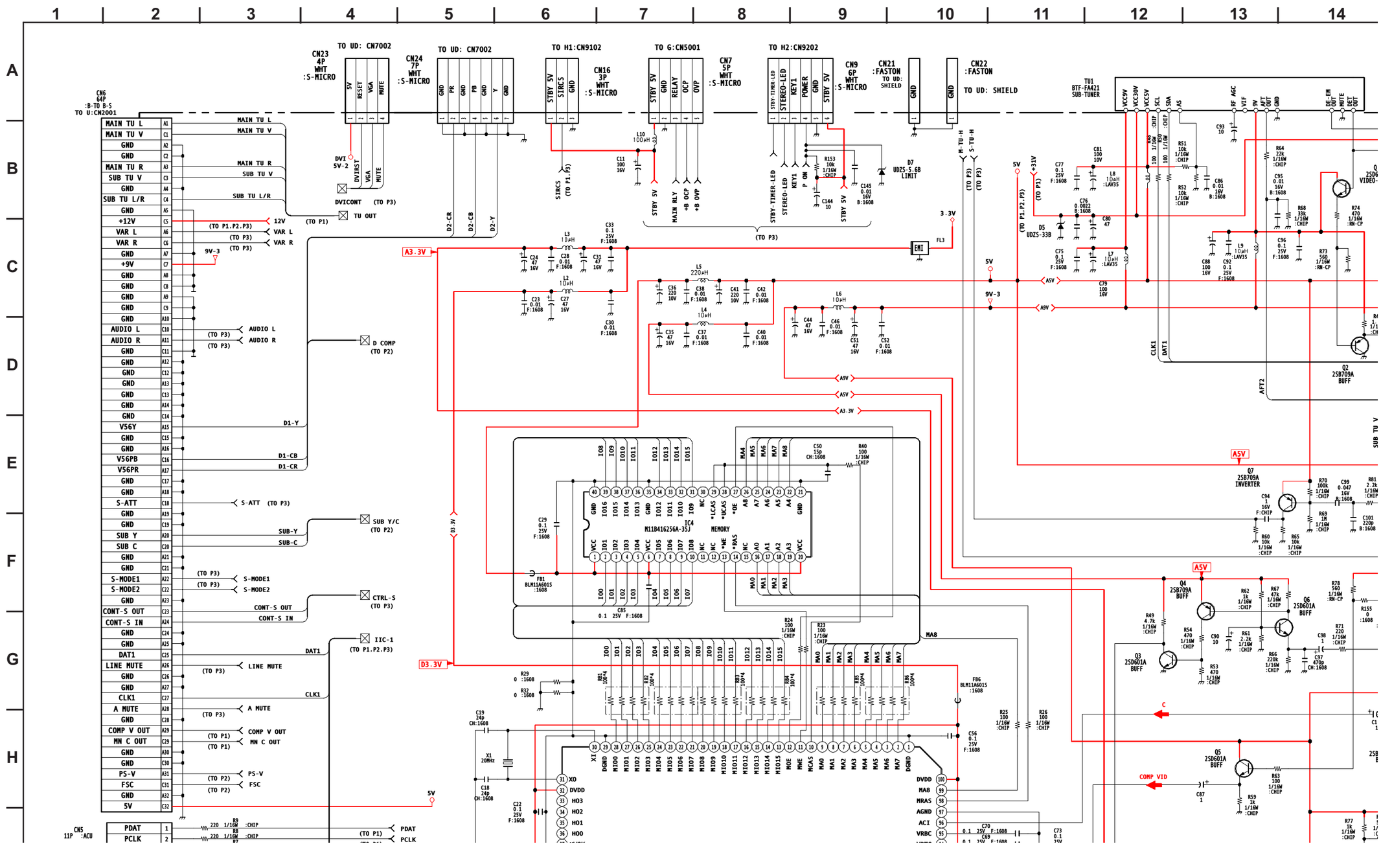

IC1606
CXP86448-636Q
PJED-CPU
IC1605
PST9143NL
DEF5V RESET
IC1607
M24C32-WMN6T(A)
PJED NVM
Q1603
2SC2412K
INV
Q1606
2SC2412K
SW
D1603
1SS355TE
D1601 1SS355TE
D1607
UPZ5.1B
D1604
UPZ5.1B
D1605
UPZ5.1B
D1606
UPZ5.1B
X1601
12MHz
AT-49
-5V
CN1601
20P
:B TO B-S
TO A:CN12
CN1602
20P
:B TO B-S
TO A:CN11
SEN_LO
SEN_R
SEN_LE
SEN_U
H SHIFT
V SHIFT
H CENT
SCLK
SDAT
/A_RESET
PCLK
PDAT
RE_B
RE_G
RE_R
RH
RV
GH
GV
BH
BV

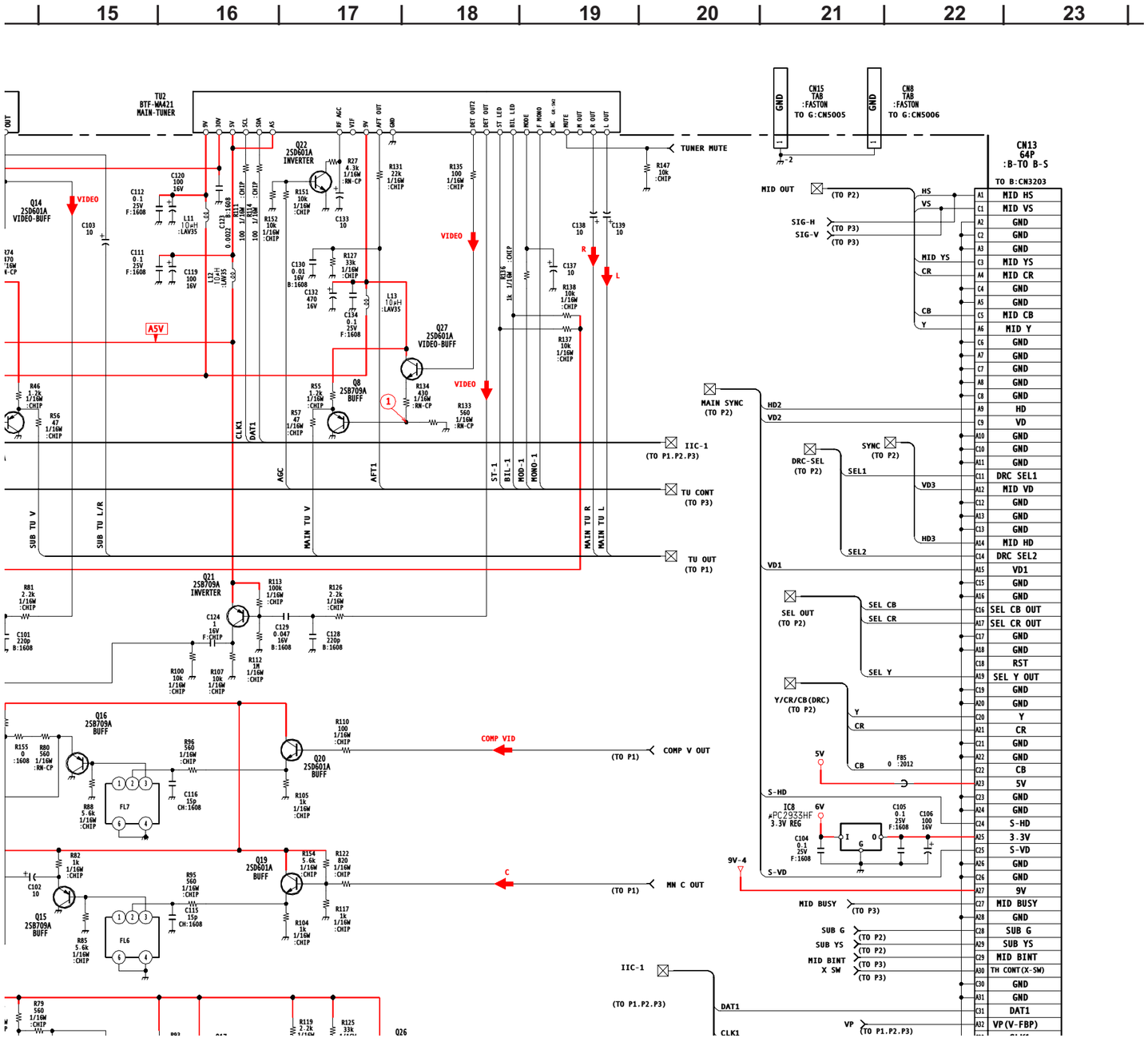


[CONDUCTOR SIDE]

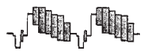


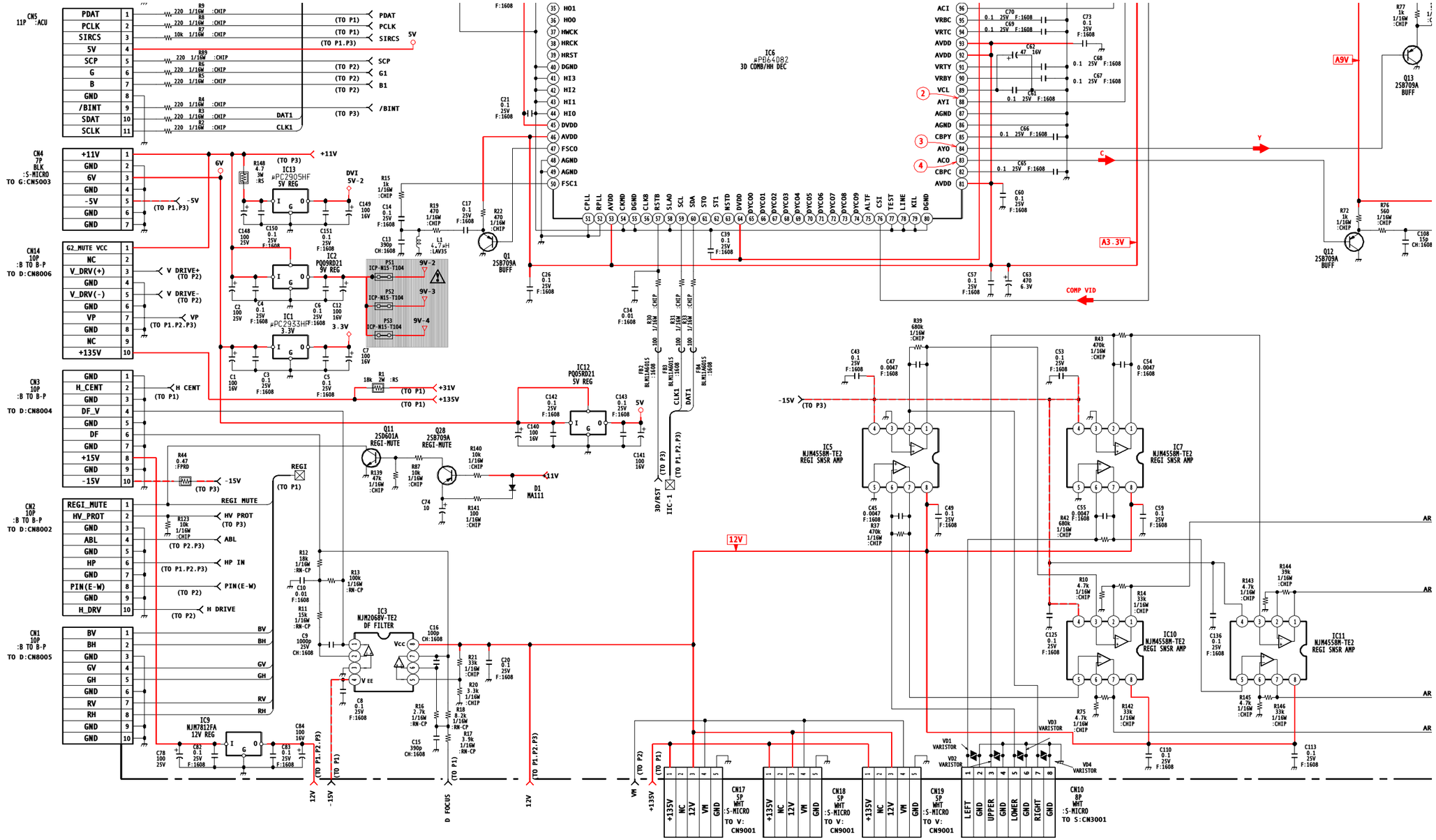
A BOARD SCHEMATIC DIAGRAM (1 OF 3)



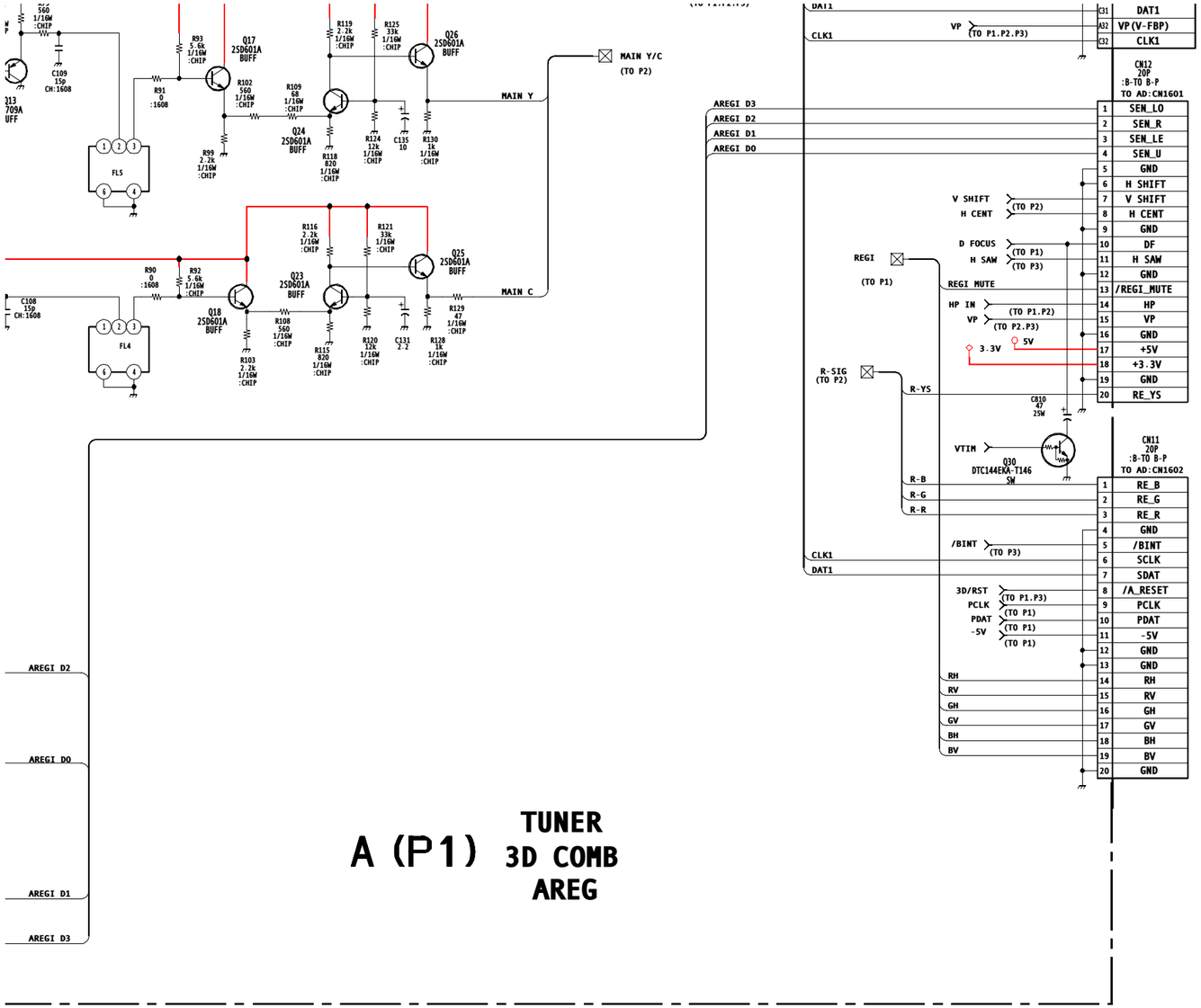


A BOARD WAVEFORMS

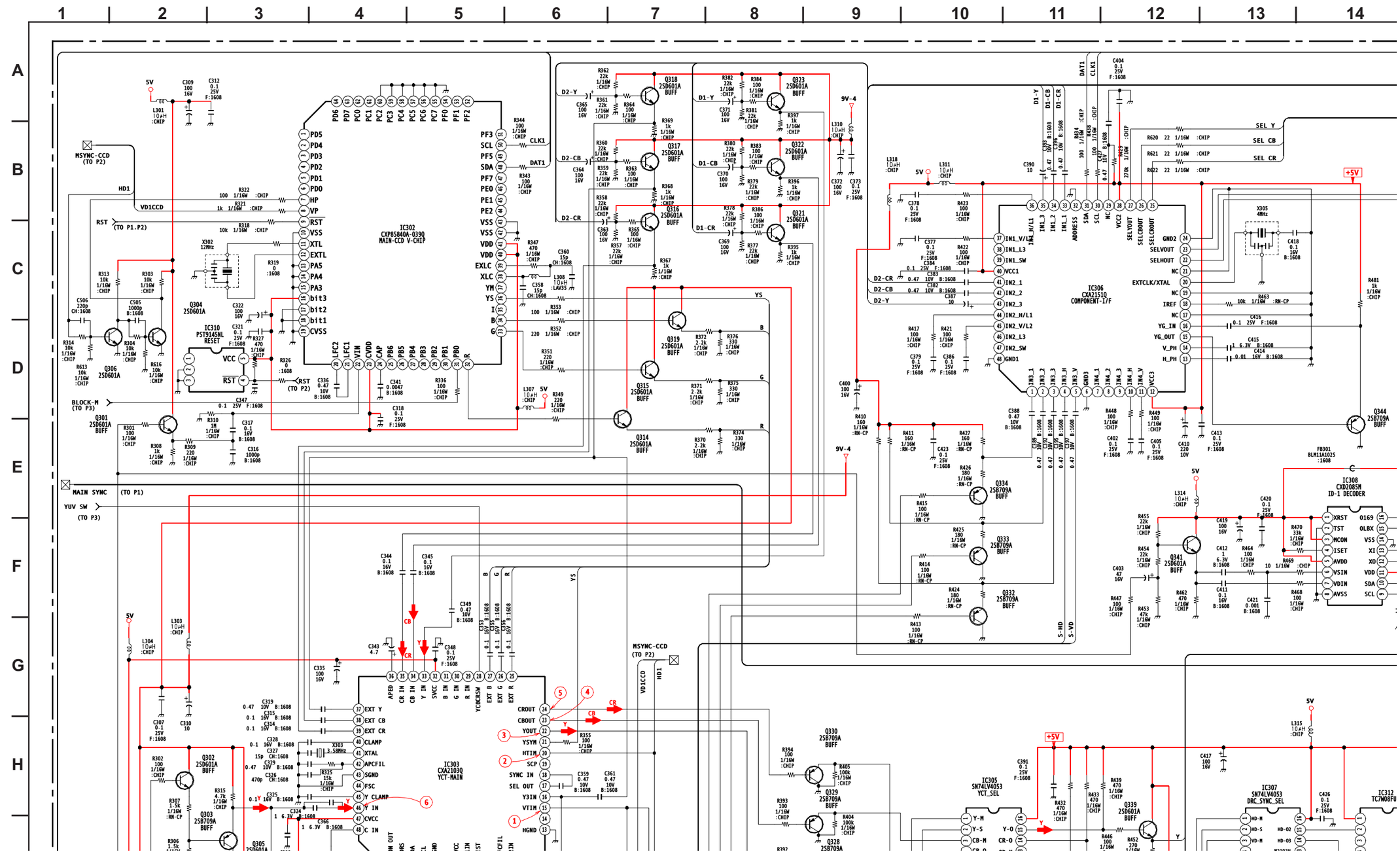
1  2.1Vp-p (H)	2 2.1Vp-p (H)
3 3Vp-p (H)	4 2Vp-p (H)

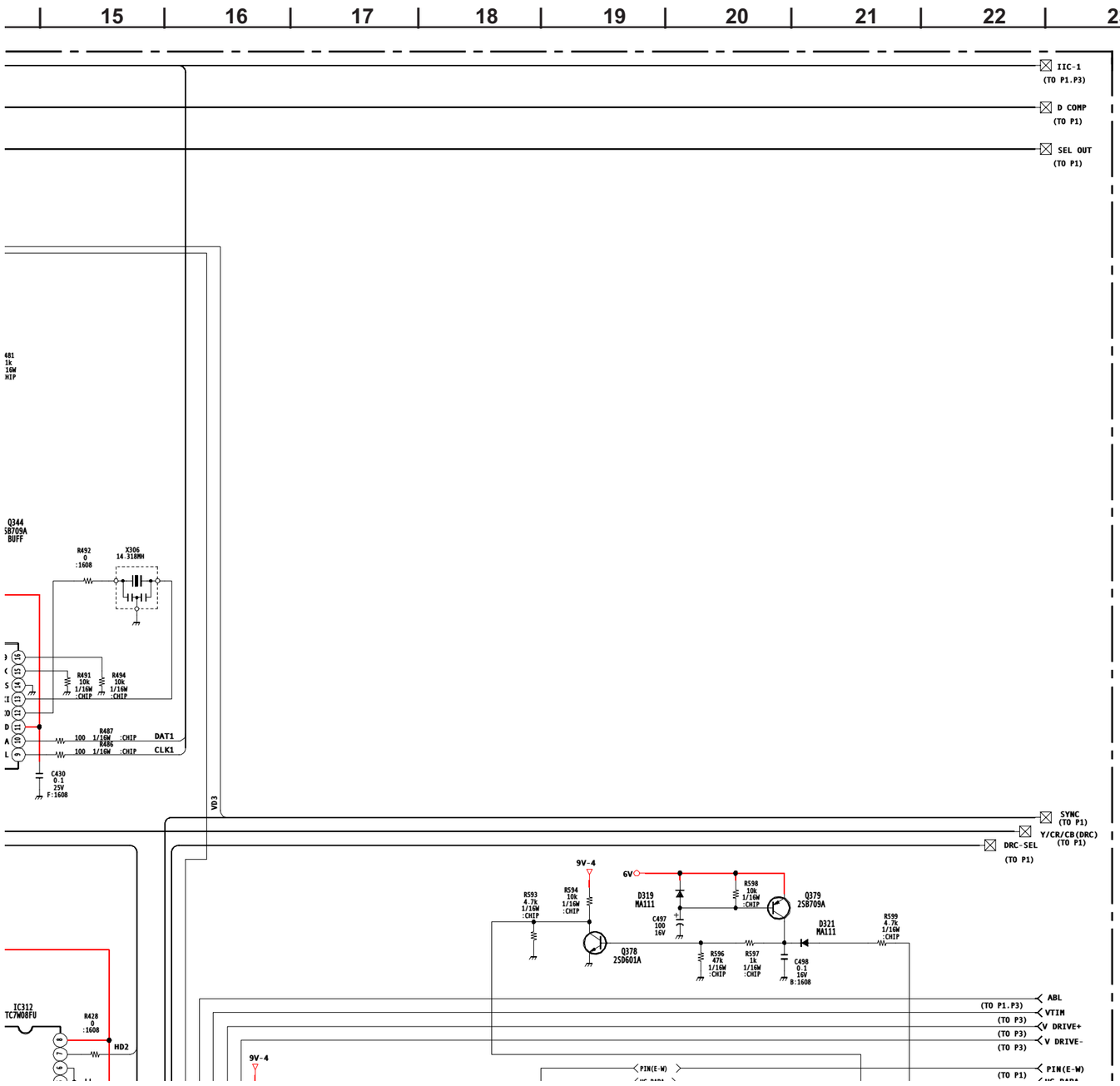

CN5 11P :ACU
PDAT
PCLK
SIRCS
5V
SCP
G
B
GND
/BINT
SDAT
SCLK
CN4 7P BLK :S-MICRO TO G:CN5003
+11V
GND
6V
GND
-5V
GND
GND
CN14 10P :B TO B-P TO D:CN8006
G2_MUTE VCC
NC
V_DRV(+)
GND
V_DRV(-)
GND
VP
GND
NC
+135V
CN3 10P :B TO B-P TO D:CN8004
GND
H_CENT
GND
DF_V
GND
DF
GND
+15V
GND
-15V
CN2 10P :B TO B-P TO D:CN8002
REGI_MUTE
HV_PROT
GND
ABL
GND
HP
GND
PIN(E-W)
GND
H_DRV
CN1 10P :B TO B-P TO D:CN8005
BV
BH
GND
GV
GH
GND
RV
RH
GND
GND
IC6 μPB64082 3D COMB/HH DEC
IC13 μPC2905HF 5V REG
IC2 PQ09RD21 9V REG
IC1 μPC2933HF 3.3V
IC12 PQ05RD21 5V REG
IC9 NJM7812FA 12V REG
IC3 NJM2068V-TE2 DF FILTER
IC5 NJM4558M-TE2 REGI SNSR AMP
IC7 NJM4558M-TE2 REGI SNSR AMP
IC10 NJM4558M-TE2 REGI SNSR AMP
IC11 NJM4558M-TE2 REGI SNSR AMP
Q1 2SB709A BUFF
Q11 2SD601A REGI-MUTE
Q28 2SB709A REGI-MUTE
Q13 2SB709A BUFF
Q12 2SB709A BUFF
D1 MA111
VD1 VARISTOR
VD2 VARISTOR
VD3 VARISTOR
VD4 VARISTOR
CN17 5P WHT :S-MICRO TO V: CN9001
CN18 5P WHT :S-MICRO TO V: CN9001
CN19 5P WHT :S-MICRO TO V: CN9001
CN10 8P WHT :S-MICRO TO S:CN3001
A9V
A3.3V
COMP VID
12V
-15V
+11V
+31V
+135V
5V
-5V
REGI
REGI MUTE
HV PROT
ABL
HP IN
PIN(E-W)
H DRIVE
V DRIVE+
V DRIVE-
VP
DVI 5V-2
9V-2
9V-3
9V-4
AR
D FOCUS

A (P1) TUNER 3D COMB AREG

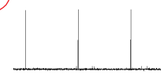
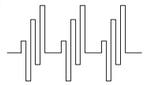
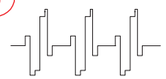
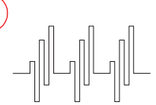
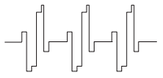
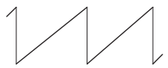


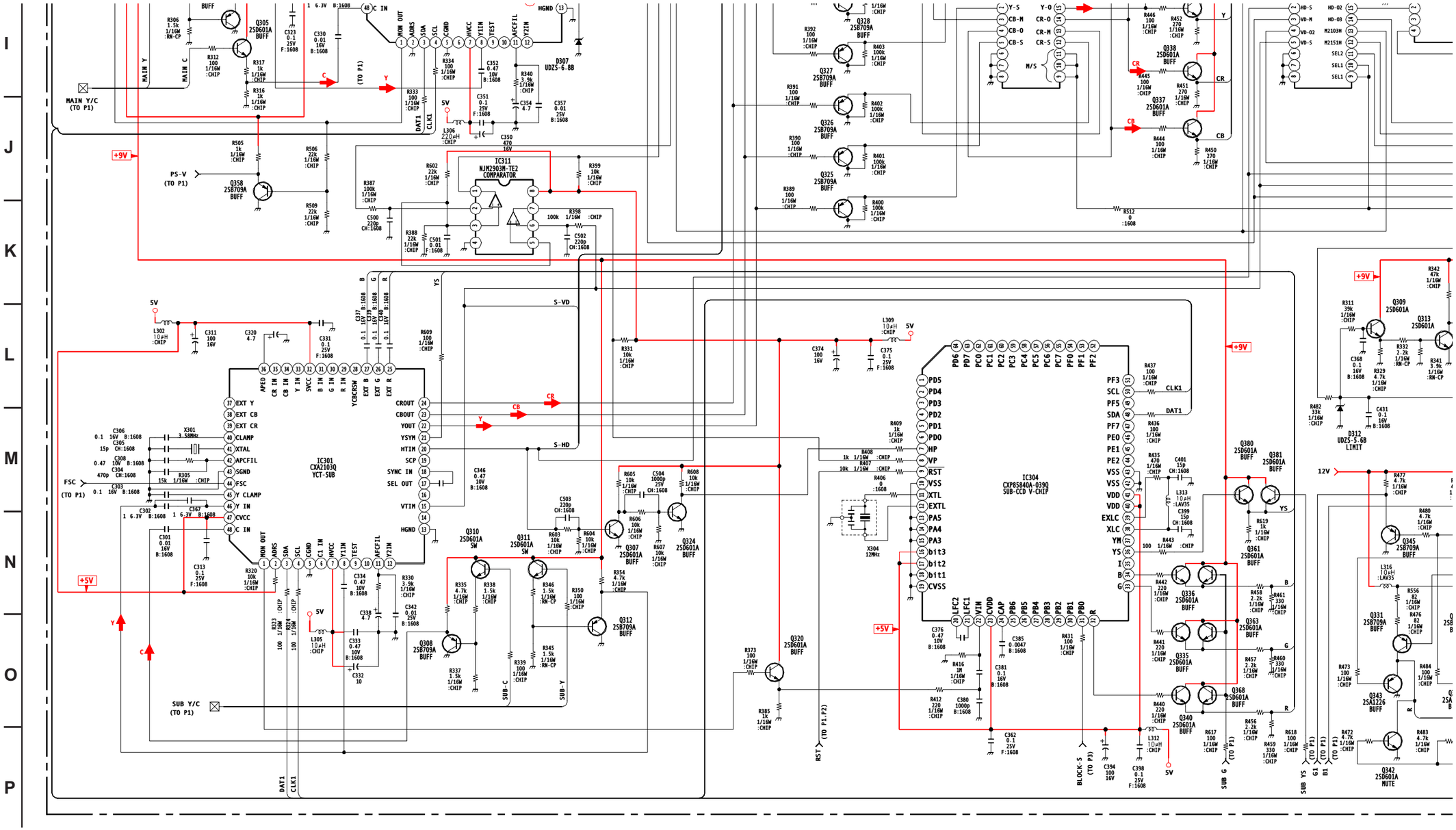
A BOARD SCHEMATIC DIAGRAM (2 OF 3)





A BOARD WAVEFORMS

1  3.5 Vp-p (V)	2 3.7 Vp-p (H)	3 1.5 Vp-p (H)
4  1.2 Vp-p (H)	5  1.3 Vp-p	6 1.2 Vp-p (H)
7 1.2 Vp-p (H)	8  0.6 Vp-p	9  0.7 Vp-p (M)
10 3.8 Vp-p (H)	11  1.4 Vp-p (V)	12 1.4 Vp-p (V)
13 3.3 Vp-p (H)	14 3.5 Vp-p (H)	15 2.3 Vp-p (H)

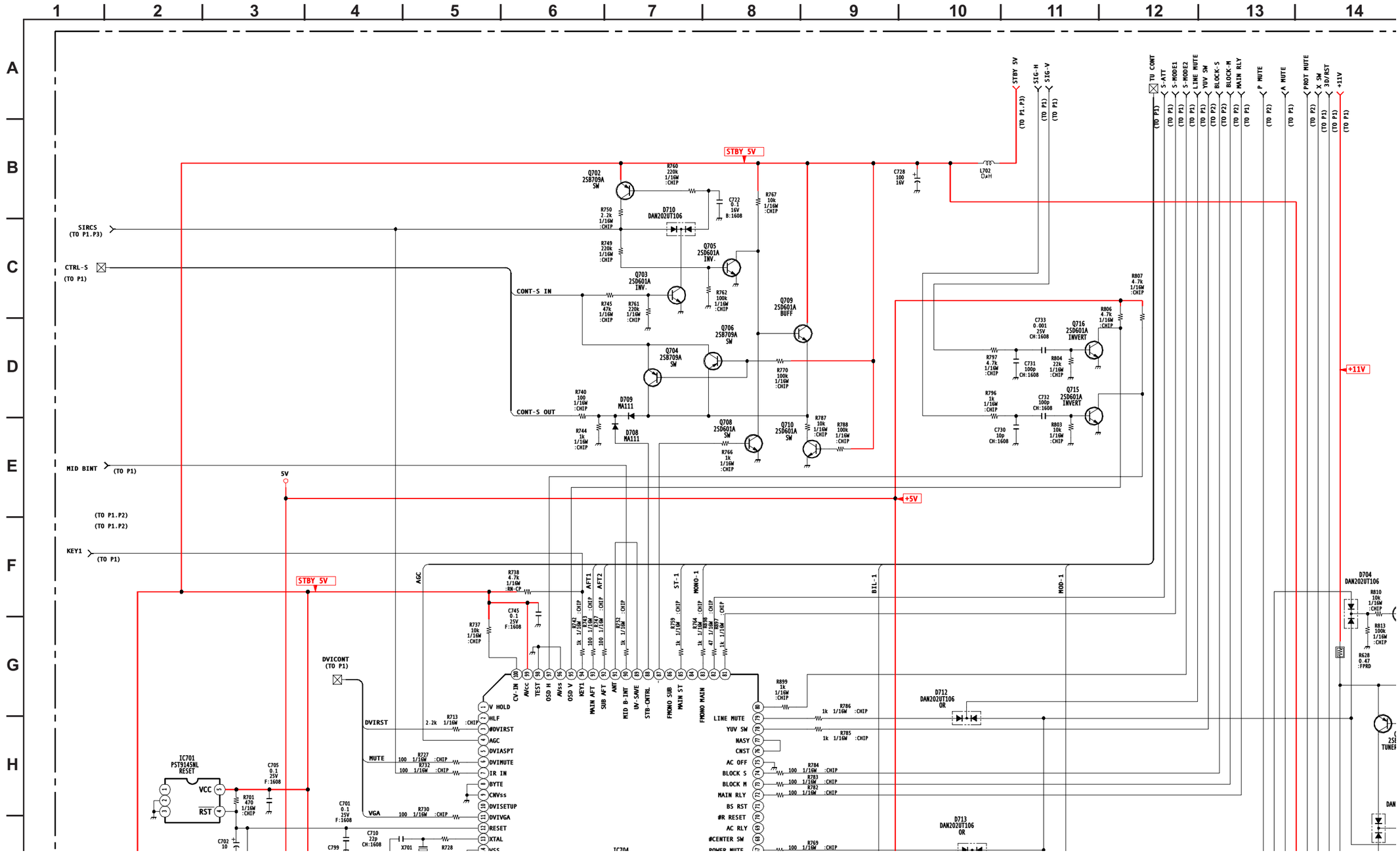

IC301
CXA2103Q
YCT-SUB
IC304
CXP85840A-039Q
SUB-CCD V-CHIP
IC311
NJM2903M-TE2
COMPARATOR
MAIN Y/C
(TO P1)
PS-V
(TO P1)
SUB Y/C
(TO P1)
FSC
(TO P1)
+9V
5V
+5V
12V
S-VD
S-HD
SUB-C
SUB-Y
SUB G
SUB YS
BLOCK-S
(TO P3)
RST
(TO P1,P2)
X301
3.58MHz
X304
12MHz
D307
UDZ5-6.8B
D312
UDZ5-5.6B
LIMIT
Q305
2SD601A
BUFF
Q307
2SD601A
BUFF
Q308
2SB709A
BUFF
Q310
2SD601A
SW
Q311
2SD601A
SW
Q312
2SB709A
BUFF
Q320
2SD601A
BUFF
Q324
2SD601A
BUFF
Q325
2SB709A
BUFF
Q326
2SB709A
BUFF
Q327
2SB709A
BUFF
Q328
2SB709A
BUFF
Q331
2SB709A
BUFF
Q335
2SD601A
BUFF
Q336
2SD601A
BUFF
Q337
2SD601A
BUFF
Q338
2SD601A
BUFF
Q340
2SD601A
BUFF
Q342
2SD601A
MUTE
Q343
2SA1226
BUFF
Q345
2SB709A
BUFF
Q358
2SB709A
BUFF
Q361
2SD601A
BUFF
Q363
2SD601A
BUFF
Q368
2SD601A
BUFF
Q380
2SD601A
BUFF
Q381
2SD601A
BUFF
Q309
2SD601A
Q313
2SD601A
MAIN Y
MAIN C
CLK1
DAT1
M/S
CR
CB
Y
C
YS
I
B
G
R

A (P2)
CRT DRIVE
YCT

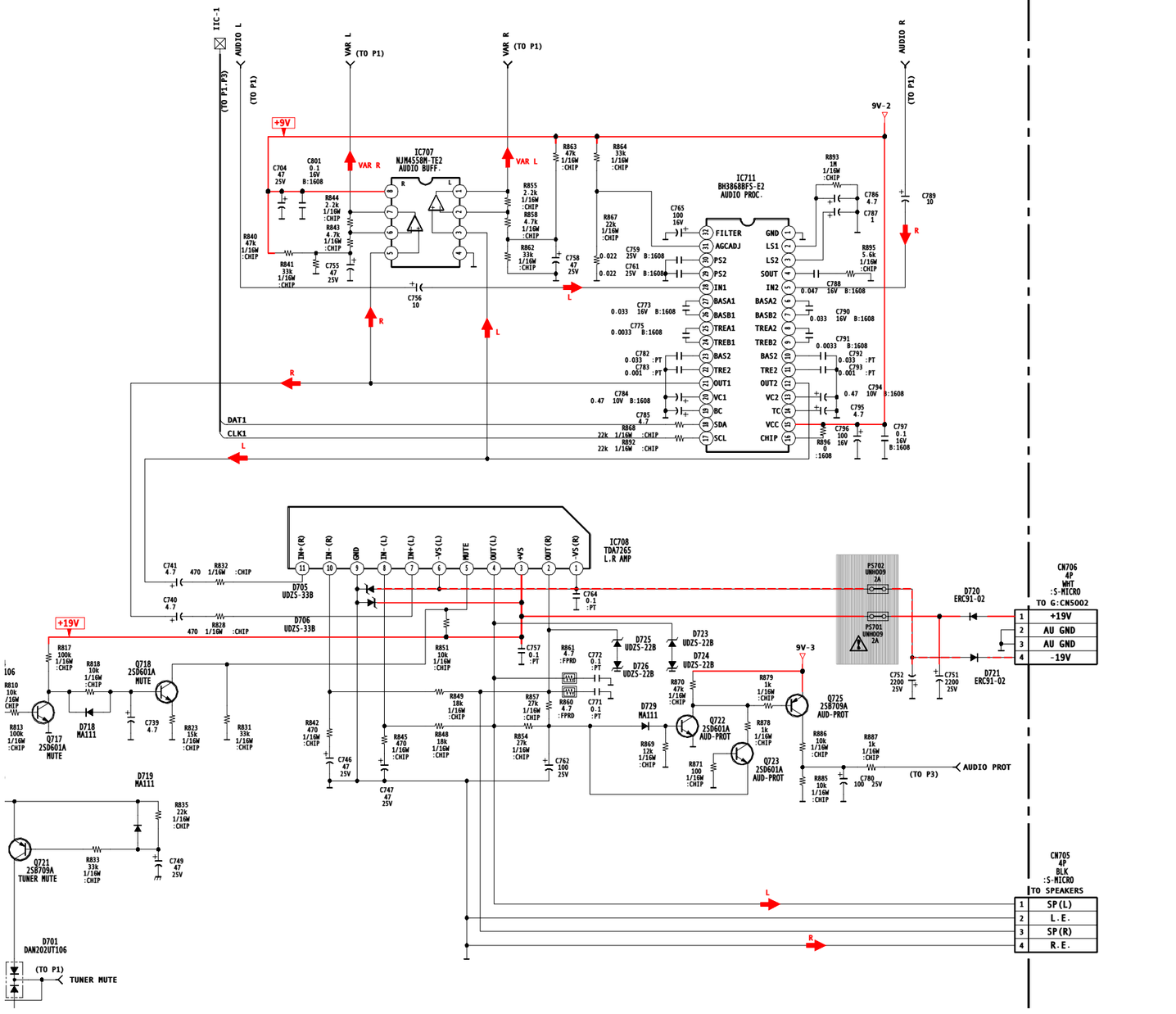
IC309
CXA2150AQ
Y/C/CRT DRIVE

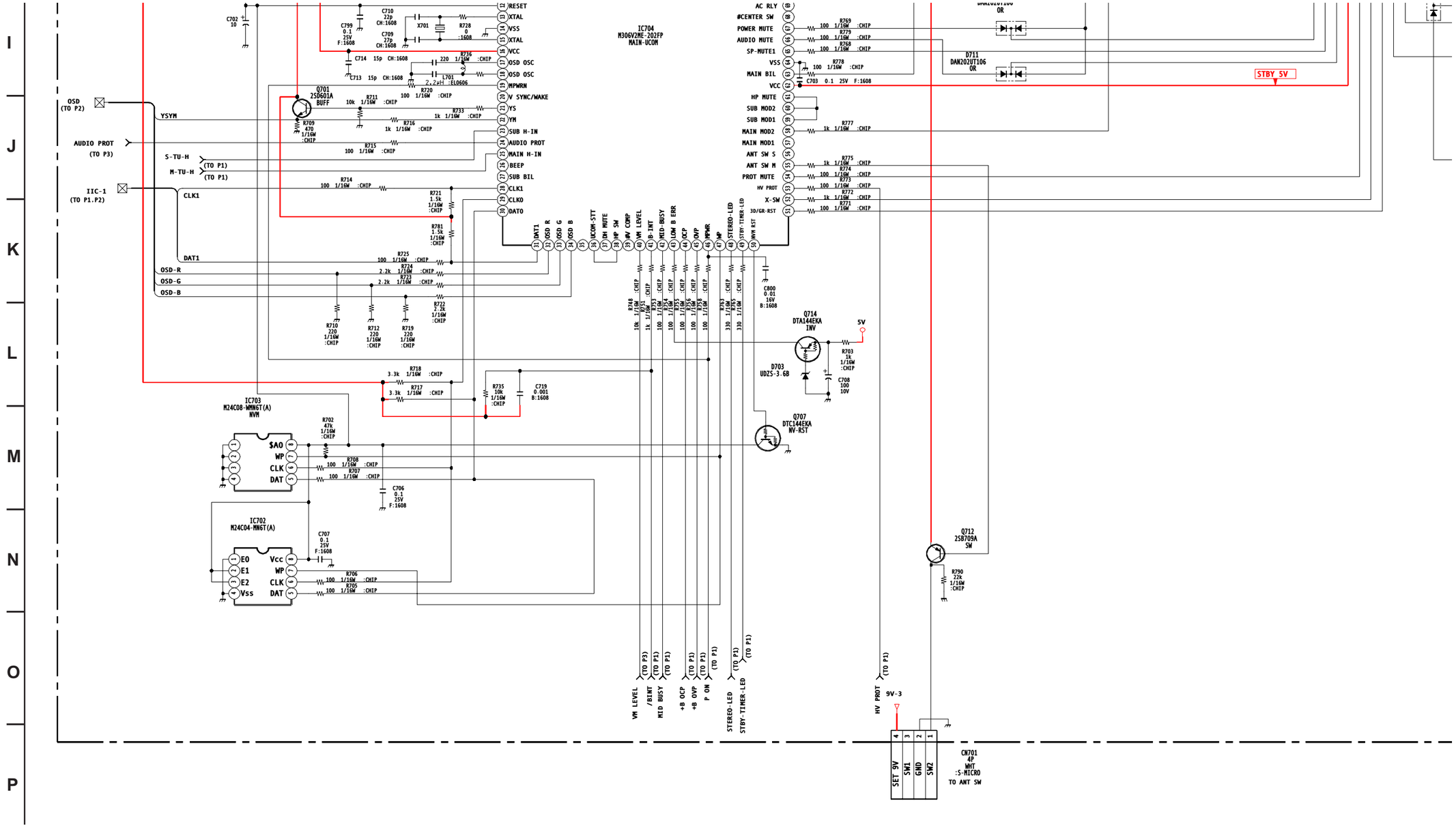
9-965-932-01<RA6>A 2/3

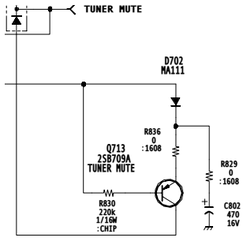
A BOARD SCHEMATIC DIAGRAM (3 OF 3)



15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23

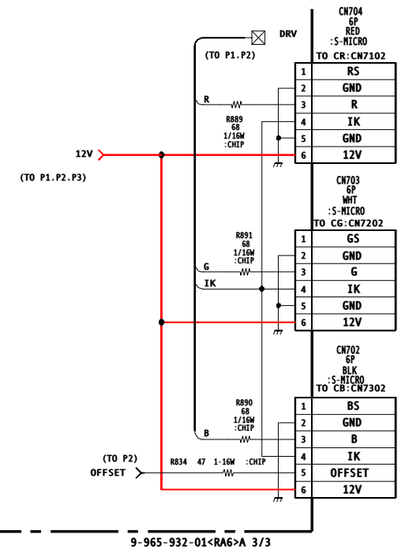



IC704
M306V2ME-202FP
MAIN-UCOM
IC703
M24C08-WMN6T(A)
NVM
IC702
M24C04-WMN6T(A)
Q701
2SD601A
BUFF
Q714
DTA144EKA
INV
Q707
DTC144EKA
NV-RST
Q712
2SB709A
SW
D703
UDZ5-3.6B
D711
DAN202UT106
OR
X701
L701
2.2μH :EL0606
OSD
(TO P2)
AUDIO PROT
(TO P3)
S-TU-H
M-TU-H
(TO P1)
IIC-1
(TO P1.P2)
YSYM
CLK1
DAT1
OSD-R
OSD-G
OSD-B
RESET
XTAL
VSS
VCC
OSD OSC
MPWRN
V SYNC/WAKE
YS
YM
SUB H-IN
AUDIO PROT
MAIN H-IN
BEEP
SUB BIL
CLK1
CLKO
DATO
AC RLY
#CENTER SW
POWER MUTE
AUDIO MUTE
SP-MUTE1
MAIN BIL
HP MUTE
SUB MOD2
SUB MOD1
MAIN MOD2
MAIN MOD1
ANT SW S
ANT SW M
PROT MUTE
HV PROT
X-SW
3D/GR-RST
STBY 5V
5V
9V-3
SET 9V
SW1
GND
SW2
CN701
4P
WHT
:S-MICRO
TO ANT SW
VM LEVEL
/BINT
MID BUSY
+B OCP
+B OVP
P ON
STEREO-LED
STBY-TIMER-LED

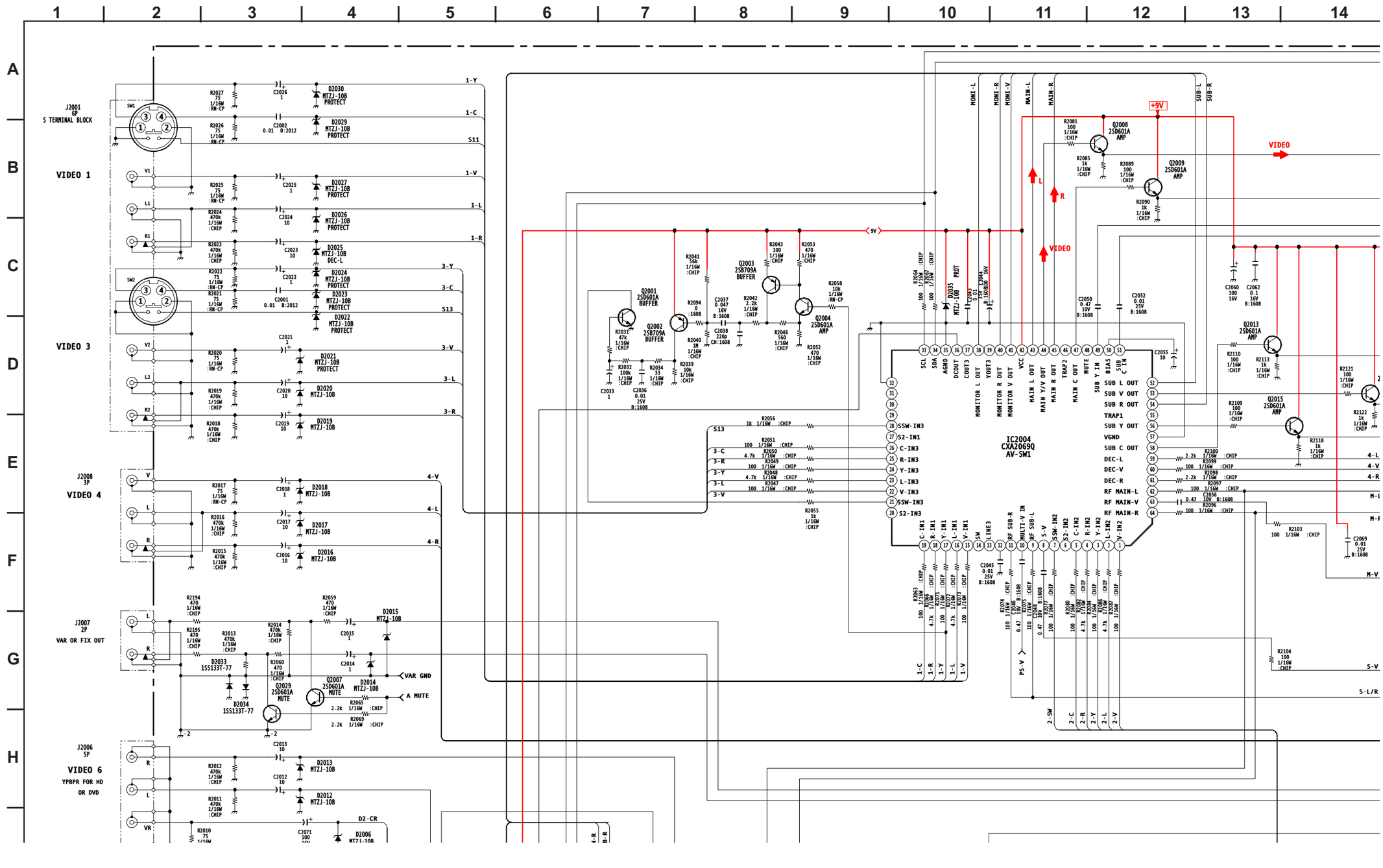


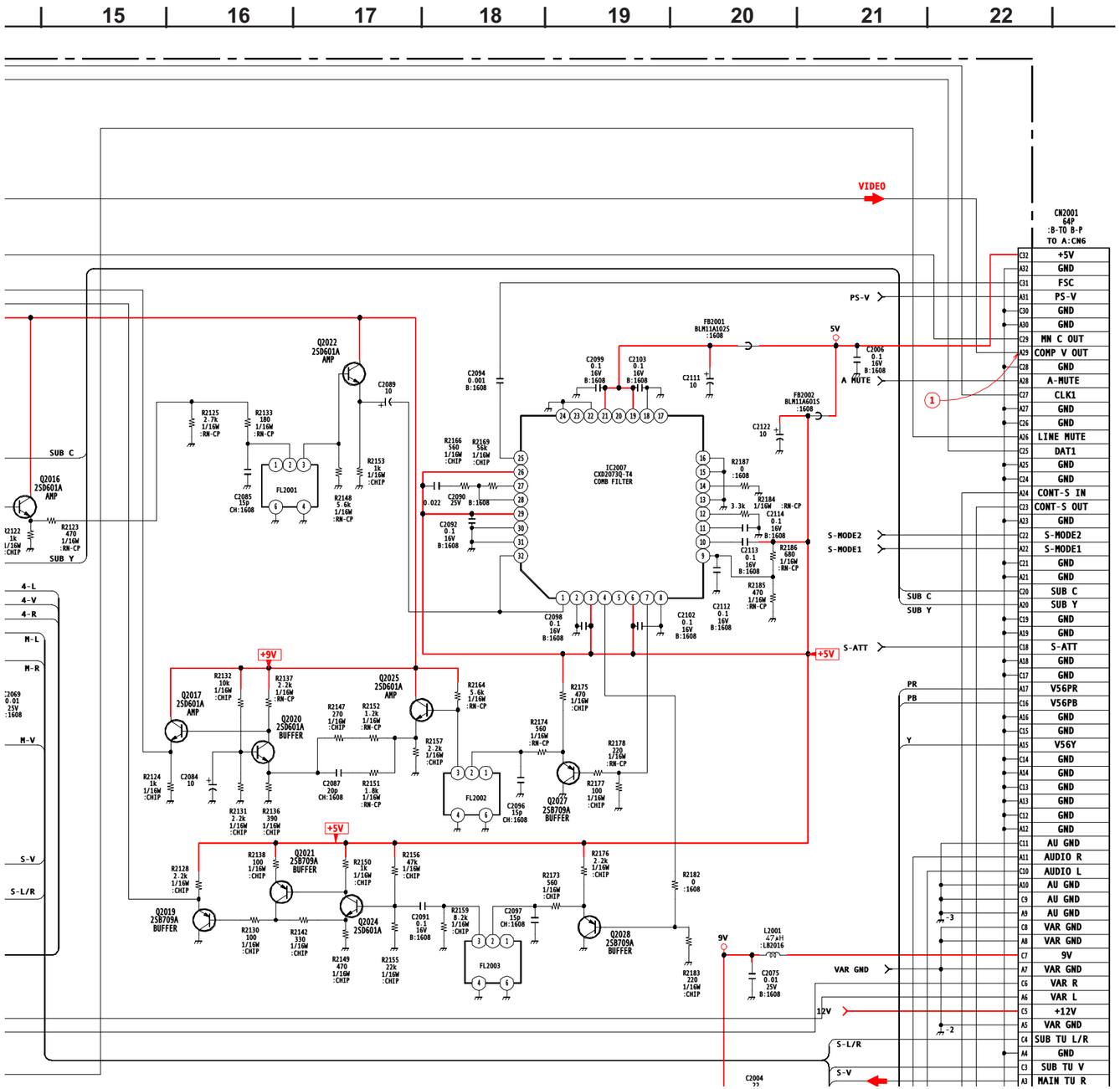
A (P3)

SYSTEM CONTROL
AUDIO OUTPUT



U BOARD SCHEMATIC DIAGRAM





U BOARD IC VOLTAGE LIST

IC2001		IC2003		37	NC	19	5.0	17	6.0
PIN	VOLT	PIN	VOLT	38	4.5	20	NC	18	6.0
1	GND	1	4.5	39	NC	21	5.0	19	6.0
2	4.5	2	4.5	40	4.5	22	GND	20	6.0
3	9.0	3	4.4	41	4.4	23	NC	21	6.0
4	4.5	4	GND	42	9.0	24	GND	22	6.0
5	4.5	5	4.4	43	4.4	25	2.5	23	6.0
6	4.5	6	4.5	44	4.3	26	5.0	24	6.0
7	NC	7	4.5	45	4.5	27	2.2	25	6.0
8	NC	8	9.0	46	NC	28	2.2	26	6.0
9	NC	IC2004		47	4.4	29	5.0	27	6.0
10	4.4	PIN	VOLT	48	NC	30	GND	28	NC
11	4.4	1	3.9	49	5.3	31	GND	29	6.0
12	4.5	2	4.4	50	4.5	32	1.8	30	6.0
13	4.5	3	3.9	51	4.4	IC2304			
14	NC	4	4.4	52	4.5	PIN	VOLT		
15	NC	5	0.5	53	4.9	1	4.5		
16	NC	6	NC	54	4.5	2	4.5		
17	NC	7	4.9	55	NC	3	4.5		
18	4.4	8	4.5	56	4.5	4	4.5		
19	4.4	9	4.4	57	GND	5	8.6		
20	NC	10	4.3	58	4.3	6	0.3		
21	NC	11	4.4	59	4.4	7	GND		
22	NC	12	4.4	60	3.9	8	4.5		
23	4.4	13	NC	61	4.4	9	4.5		
24	4.5	14	NC	62	4.4	10	4.5		
25	4.4	15	3.9	63	4.3	11	4.5		
26	GND	16	4.4	64	4.5	12	0.3		
27	4.4	17	3.9	IC2007		13	8.6		
28	4.4	18	4.4	PIN	VOLT	14	9.0		
IC2002		19	4.4	1	1.8	IC2305			
PIN	VOLT	20	NC	2	GND	PIN	VOLT		
1	4.6	21	4.9	3	5.0	1	11.1		
2	5.0	22	3.9	4	1.1	2	0.0		
3	3.1	23	3.9	5	NC	3	0.0		
4	GND	24	4.4	6	5.0	4	6.0		
5	3.1	25	3.9	7	1.3	5	GND		
6	3.1	26	4.4	8	GND	6	10.0		
7	5.0	27	NC	9	2.0	7	NC		
8	4.6	28	0.1	10	2.7	8	NC		
9	4.6	29	NC	11	1.0	9	NC		
10	GND	30	NC	12	2.0	10	NC		
11	4.6	31	NC	13	GND	11	6.0		
12	5.0	32	GND	14	0.0	12	6.0		
13	9.0	33	4.4	15	GND	13	6.0		

All voltages are in V.

I J K L M N O P

J2009 2P
VIDEO 7
DVI AUDIO

J2005 5P
VIDEO 5
YPBPR FOR HD
OR DVD

J2004 3P
MONITOR OUT

J2003 3P

J2002 3P

D2-CR D2-CB D2-Y D1-CR D1-CB D1-Y

D2006 MTZJ-10B
D2009 MTZJ-10B
D2010 MTZJ-10B
D2004 MTZJ-10B
D2005 MTZJ-10B
D2008 MTZJ-10B
D2007 MTZJ-10B
D2011 MTZJ-10B
D2031 MTZJ-10B
D2032 MTZJ-10B
D2003 MTZJ-10B
D2039 MTZJ-10B
D2042 MTZJ-10B
D2002 MTZJ-10B
D2001 MTZJ-10B

IC2001
TEA6422DT
AUDIO SWITCH

IC2003
NJM4558-TE2
AUDIO-BUFFER

Q2006 2SD601A MUTE
Q2005 2SD601A MUTE
Q2026 2SB709A BUFFER
Q2012 2SB709A BUFFER
Q2302 2SD601A 10V REG.
Q2010 2SD601A SYNC SW

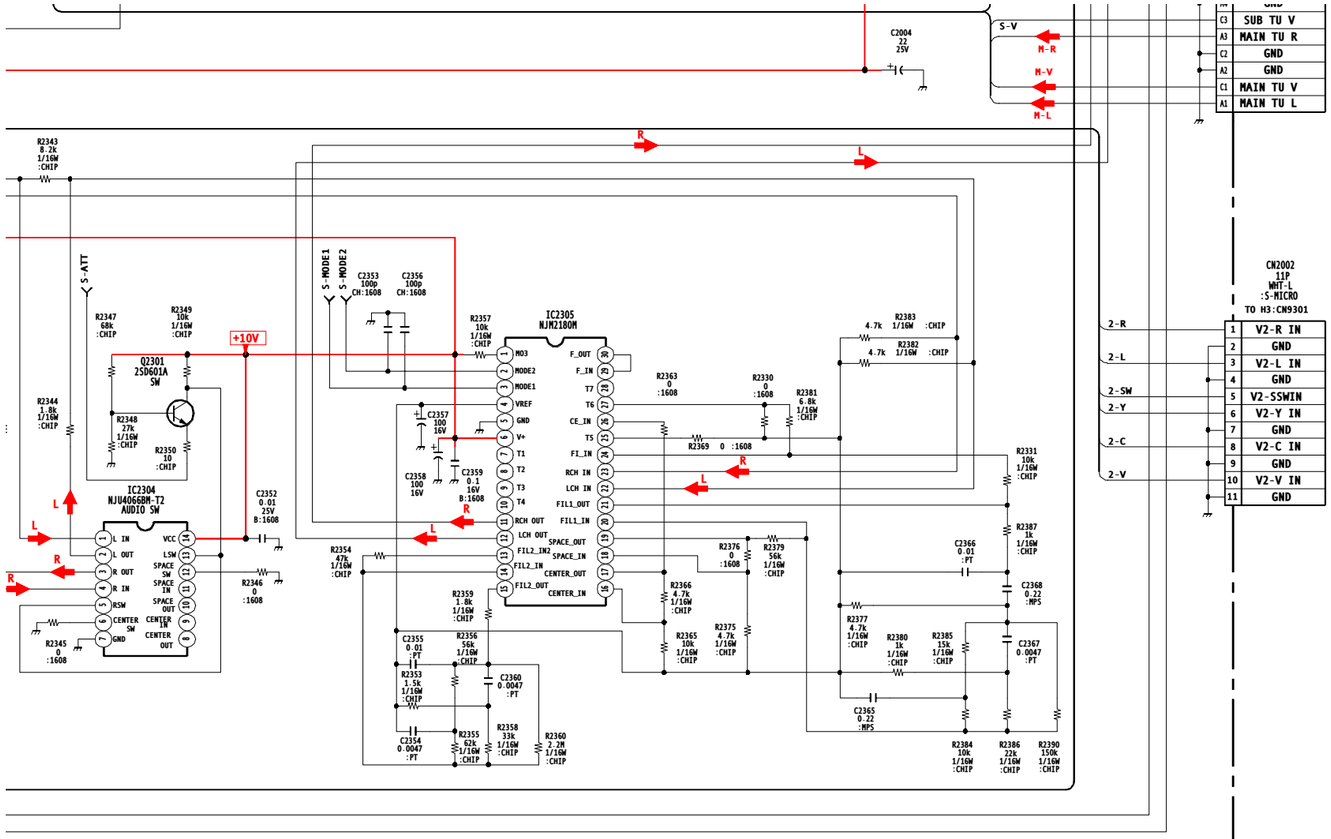
IC2002
M52055FP
Y0V SW

MAIN-R SUB-R MAIN-L SUB-L
VIDEO
MONI-V
O-R O-V O-L
+9V 12V

U BOARD WAVEFORMS

1

2.2Vp-p (H)



RMS

U

A/V SWITCH
TERMINAL BLOCK
AUDIO PROCESSOR

9-965-932-01<RA6>U

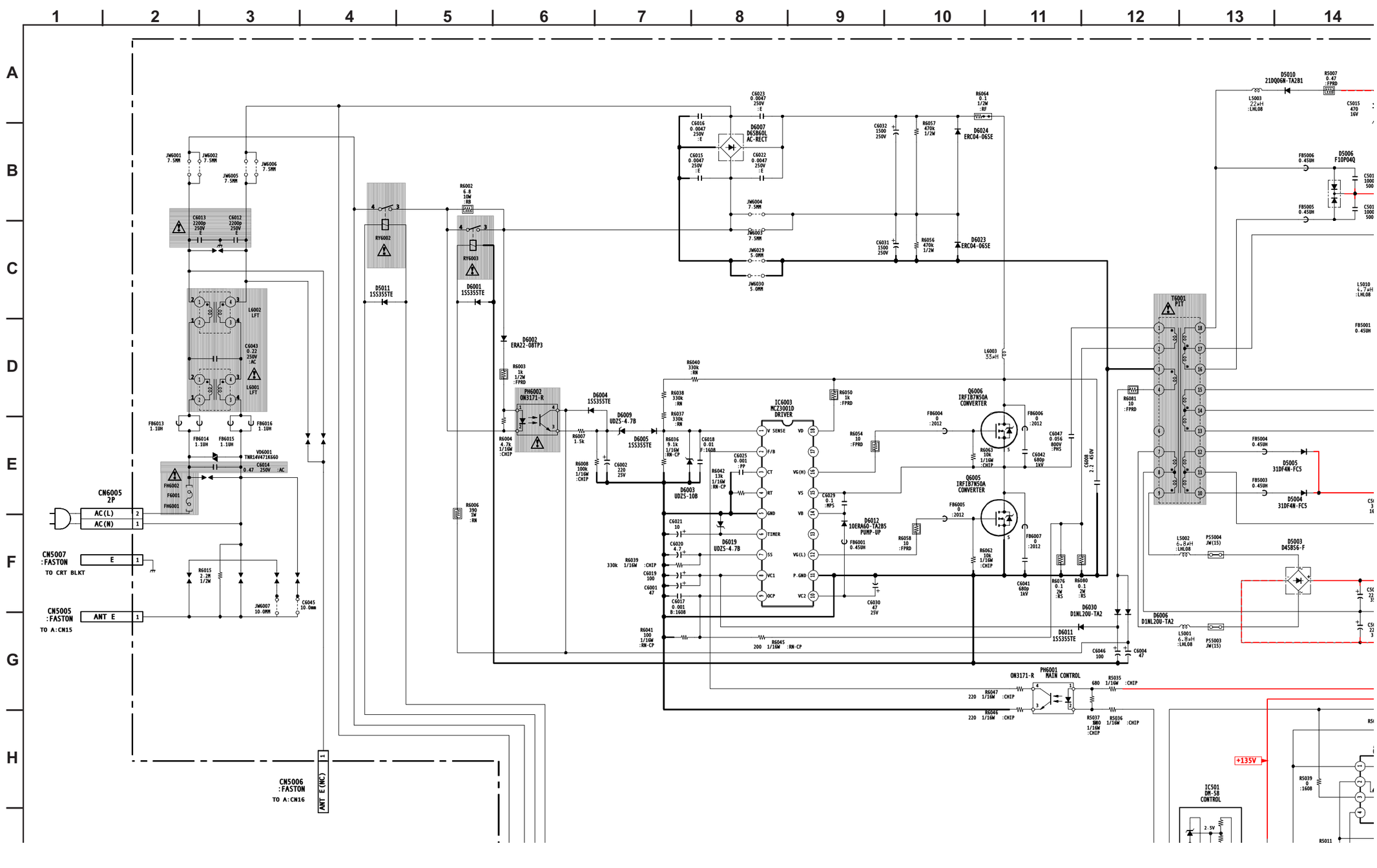
13	9.0	33	4.4	15	GND	13	6.0
14	4.6	34	4.4	16	GND	14	6.0
15	GND	35	GND	17	NC	15	6.0

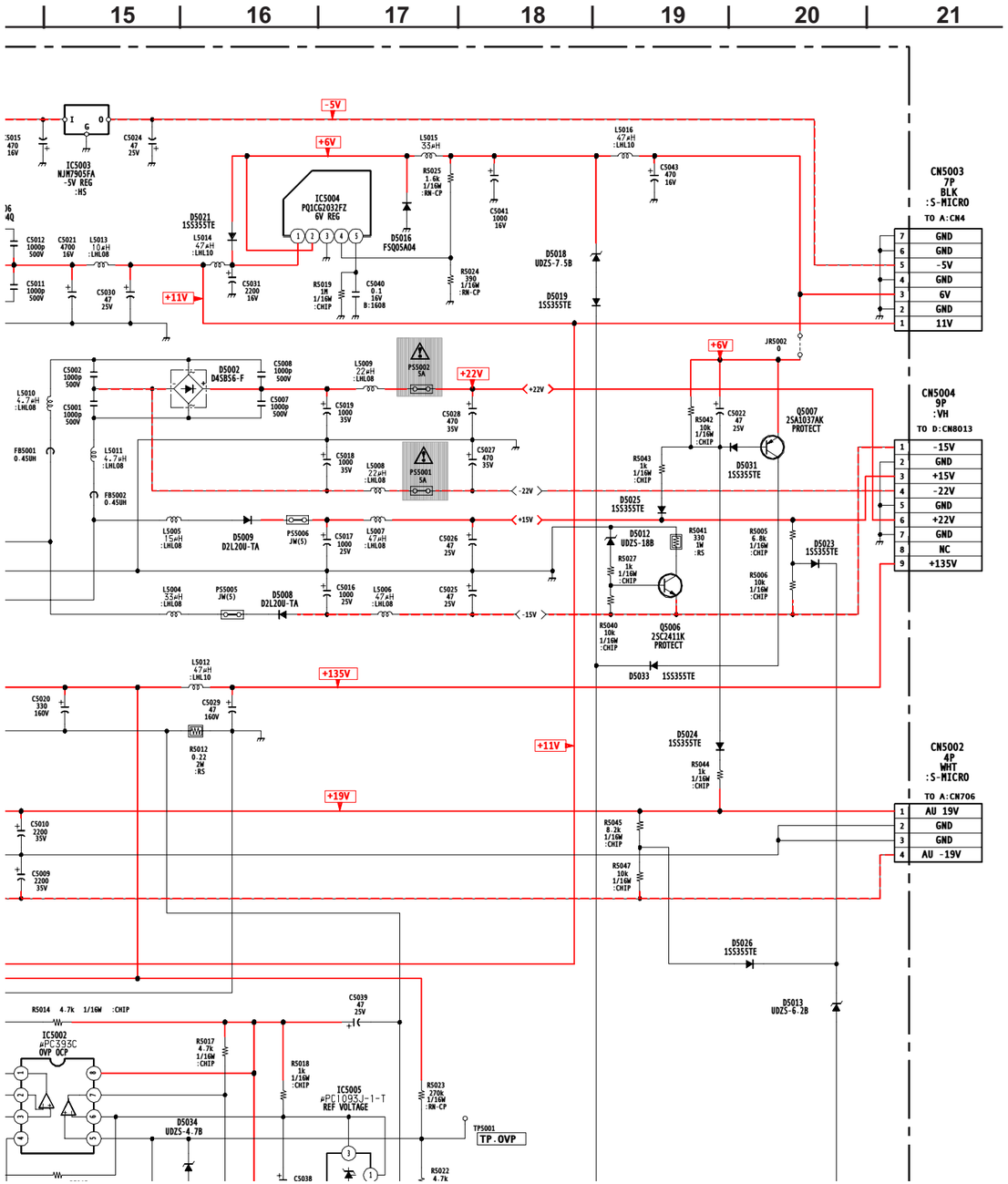
U BOARD TRANSISTOR TABLE

	B	C	E
Q2001	0.1	4.9	GND
Q2002	8.4	0.1	9.0
Q2003	7.8	5.6	8.5
Q2004	3.8	7.8	3.2
Q2005	0.3	0.0	GND
Q2006	0.3	0.0	GND
Q2007	0.4	0.0	0.0
Q2008	4.3	9.0	3.7
Q2009	4.4	9.0	3.7
Q2010	0.0	5.0	GND
Q2012	4.5	GND	5.1
Q2013	4.3	9.0	3.7
Q2015	4.5	9.0	3.9
Q2016	4.7	9.0	8.7
Q2017	5.0	9.0	4.4
Q2019	1.3	GND	2.0
Q2020	1.6	5.0	1.0
Q2021	4.2	1.3	4.8
Q2022	3.3	9.0	2.7
Q2024	1.5	4.2	0.9
Q2025	2.6	9.0	2.0
Q2026	7.2	5.1	7.9
Q2027	1.3	GND	2.0
Q2028	1.1	GND	1.7
Q2029	0.4	0.0	GND
Q2301	3.4	11.9	5.0
Q2302	0.0	12.0	12.0

All voltages are in V.

G BOARD SCHEMATIC DIAGRAM





G BOARD IC VOLTAGE LIST

IC501		IC5004		IC6003	
PIN	VOLT	PIN	VOLT	PIN	VOLT
1	134.4	1	10.4	1	-0.3
3	2.5	2	6.5	2	-0.3
4	7.3	3	GND	3	-0.3
5	GND	4	1.2	4	-0.2
IC5002		5	6.7	5	GND
PIN	VOLT	**IC5005**		6	0.0
1	-0.1	PIN	VOLT	7	0.0
2	0.1	1	2.3	8	0.0
3	0.0	2	0.0	9	0.0
4	-0.1	3	2.3	10	0.0
5	2.2	**IC5006**		11	GND
6	2.3	PIN	VOLT	12	0.0
7	-0.1	I	9.8	13	N/C
8	5.0	O	5.0	14	0.3
IC5003		G	GND	15	0.3
PIN	VOLT			16	0.3
I	-9.0			17	N/C
O	-5.0			18	0.2
G	GND				

All voltages are in V.

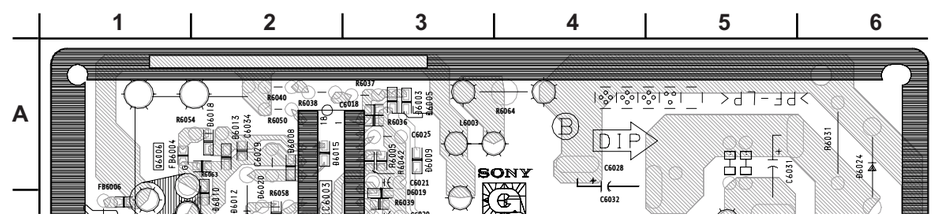
G BOARD TRANSISTOR VOLTAGE LIST

	B	C	E
Q5001	0.7	0	GND
Q5002	0.0	0.7	GND
Q5003	3.0	0.0	3.0
Q5004	0.0	3.0	GND
Q5005	22.3	9.1	22.8
Q5006	-15.0	0.0	-15.0
Q5007	6.2	0.1	6.2

	D	G	S
Q6005	0.3	-0.1	GND
Q6006	0.3	0.3	0.3

All voltages are in V.

G [POWER SUPPLY] [COMPONENT SIDE]



I

J

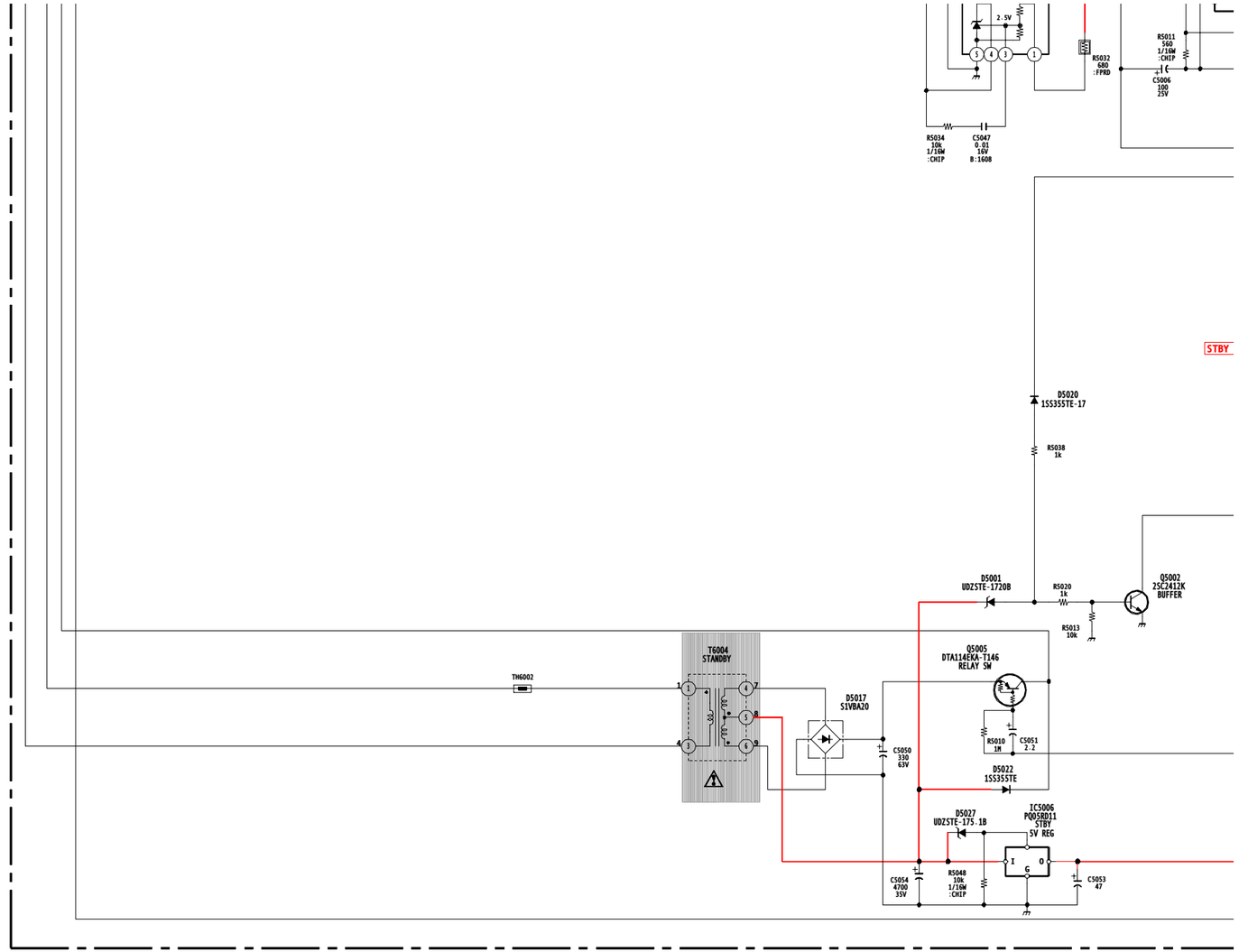
K

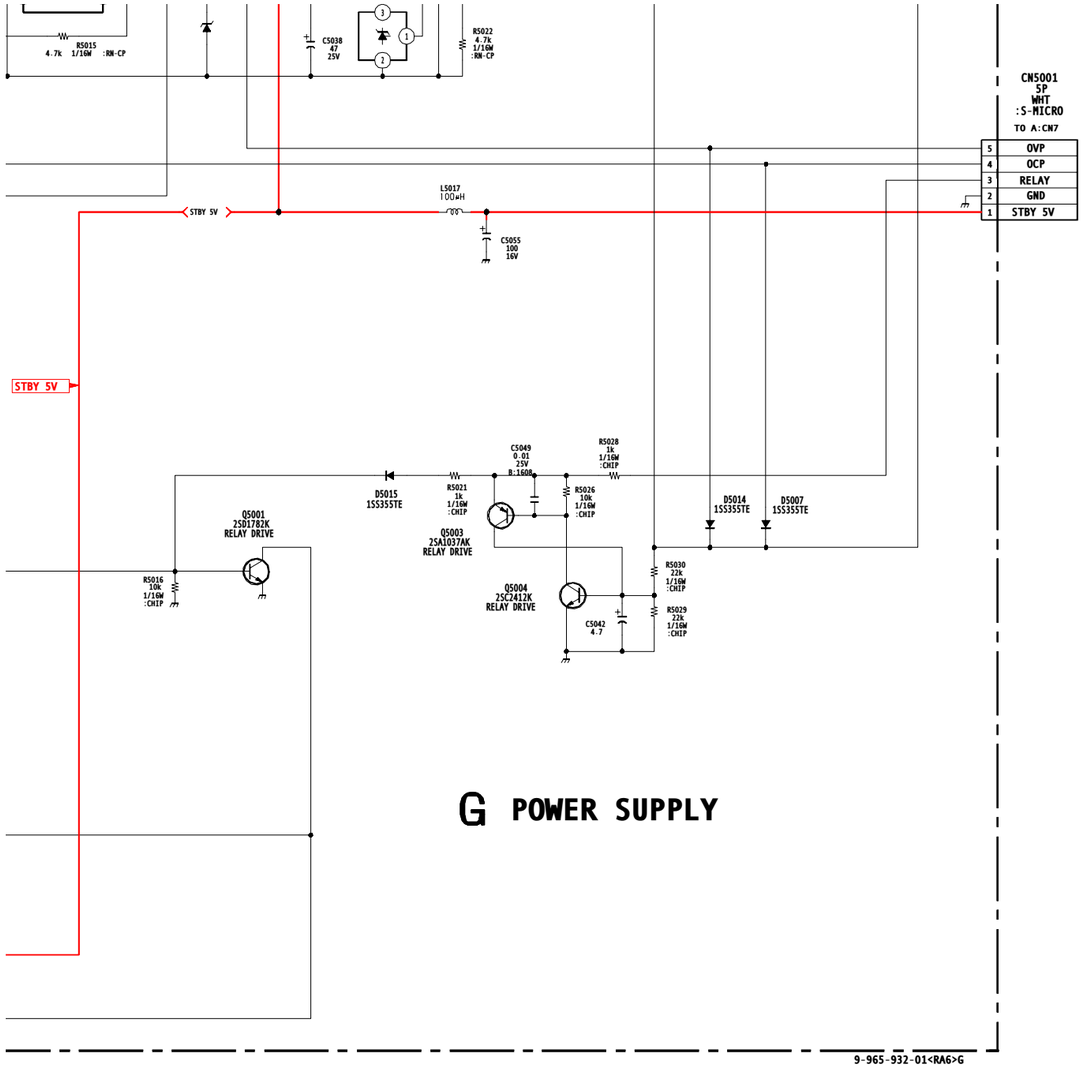
L

M

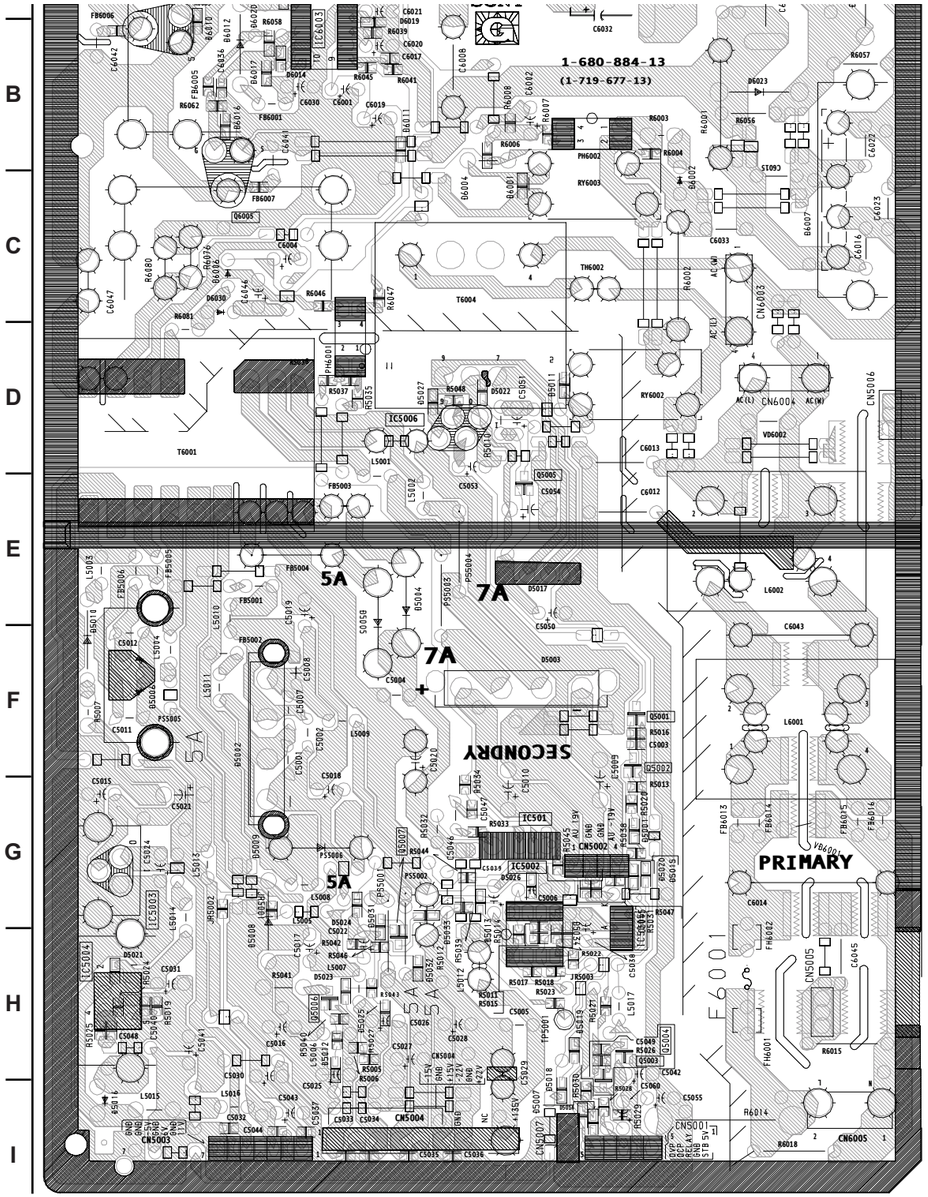
N

O


2.5V
R5032
680
:FPRD
R5011
560
1/16W
:CHIP
C5006
100
25V
R5034
10k
1/16W
:CHIP
C5047
0.01
16V
B:1608
STBY
D5020
1SS355TE-17
R5038
1k
D5001
UDZSTE-1720B
R5020
1k
Q5002
2SC2412K
BUFFER
R5013
10k
T6004
STANDBY
Q5005
DTA114EKA-T146
RELAY SW
TH6002
D5017
S1VBA20
C5050
330
63V
R5010
1M
C5051
2.2
D5022
1SS355TE
D5027
UDZSTE-175.1B
IC5006
PQ05RD11
STBY
5V REG
C5054
4700
35V
R5048
10k
1/16W
:CHIP
C5053
47



9-965-932-01<RA6>G



SONY

4-088-847-11

Wide Screen Projection TV

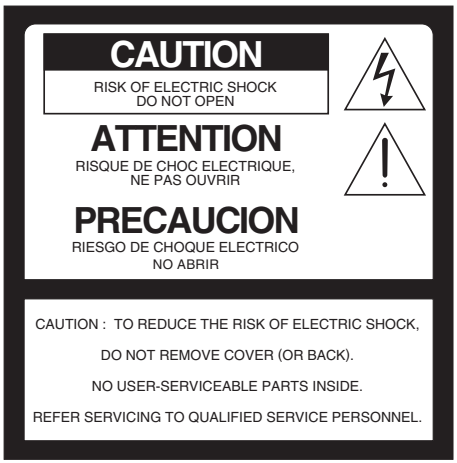
Operating Instructions

© 2002 Sony Corporation

KP-51WS500 KP-57WS500 KP-65WS500

WARNING

To prevent fire or shock hazard, do not expose the projection TV to rain or moisture.



This symbol is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

CAUTION

To prevent electric shock, do not use this polarized AC plug with an extension cord, receptacle or other outlet unless the blades can be fully inserted to prevent blade exposure.

CAUTION

When using TV games, computers, and similar products with your projection TV, or viewing a TV station whose logo always stays on the screen, keep the brightness and contrast functions at low settings. If a fixed (non-moving) pattern such as a station logo is left on the screen for long periods of time, especially at a high brightness or contrast setting, the image can be permanently imprinted onto the screen. These types of imprints are not covered by your warranty.

Note on Caption Vision

This television receiver provides display of television closed captioning in accordance with §15.119 of the FCC rules.

Note on convergence adjustment

Before you use your projection TV, make sure to adjust convergence. For details, see “Adjusting the Convergence Automatically – FLASH FOCUS™ –” on page 33.

Note to CATV system installer

This reminder is provided to call the CATV system installer’s attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

Use of this television receiver for other than private viewing of programs broadcast on UHF, VHF, transmitted by cable companies or satellite for the use of the general public may require authorization from the broadcaster/cable company and/or program owner.

NOTIFICATION

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference with radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antennas.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

You are cautioned that any changes or modifications not expressly approved in this manual could void your warranty and your authority to operate this equipment.

CAUTION

How to reduce the risk of "Image Retention" on your Projection TV

Bright, stationary images such as TV station logos displayed on your TV can cause permanent damage to your TV, resulting in retention of the image in the picture.

Please take the following steps to reduce the risk of causing image retention:

View a variety of program sources or programming material.

Image retention can occur when bright stationary images such as TV station logos are viewed. Changing the program material viewed reduces the possibility that a single image will become imprinted on the picture tubes in your TV.

When viewing programs with stationary images, adjust the picture setting to reduce the "Picture" and "Brightness" levels. Image retention is accelerated by higher "Brightness" and higher "Picture" settings.

Please refer to your instruction manual for instructions on adjusting picture settings.

This will help you reduce the risk of causing image retention.

IMAGE RETENTION IS NOT COVERED BY YOUR WARRANTY

This document is for the remote control RM-Y909.

MODELS: KP-51WS500, KP-57WS500, and KP-65WS500.

Please keep this notice with the instruction manual.

Safety

- Operate the projection TV only on 120 V AC.
- The plug is designed, for safety purposes, to fit into the wall outlet only one way. If you are unable to insert the plug fully into the outlet, contact your dealer.
- If any liquid or solid object should fall inside the cabinet, unplug the projection TV immediately and have it checked by qualified service personnel before operating it further.
- If you will not be using the projection TV for several days, disconnect the power by pulling the plug itself. Never pull on the cord.

  For details concerning safety precautions, see "IMPORTANT SAFEGUARDS" on page 4.

Installing

- To prevent internal heat buildup, do not block the ventilation openings.
- Do not install the projection TV in a hot or humid place, or in a place subject to excessive dust or mechanical vibration.
- Avoid operating the projection TV at temperatures below 5°C (41°F).
- If the projection TV is transported directly from a cold to a warm location, or if the room temperature changes suddenly, the picture may be blurred or show poor color due to moisture condensation. In this case, please wait a few hours to let the moisture evaporate before turning on the projection TV.
- To obtain the best picture, do not expose the screen to direct illumination or direct sunlight. It is recommended to use spot lighting directed down from the ceiling or to cover the windows that face the screen with opaque drapery. It is desirable to install the projection TV in a room where the floor and walls are not of a reflective material.

As an ENERGY STAR® Partner, Sony Corporation has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.

Trademark Information

TruSurround and the (●)® symbol are trademarks of SRS Labs, Inc. TruSurround technology is incorporated under license from SRS Labs, Inc.

BBE and BBE Symbol are trademarks of BBE Sound, Inc. and are licensed by BBE Sound, Inc. under U.S. Patent No. 4,638,258 and 4,482,866.

Steady Sound, Digital Reality Creation, Caption Vision, CineMotion, Memory Stick, and Twin View are registered trademarks of Sony Corporation. ClearEdge VM and HD Detailer are trademarks of Sony Corporation.

Owner's Record

The model and serial numbers are located at the rear of the projection TV, below the Sony logo, on the sticker, and also on the TV box (white label). Record these numbers in the spaces provided below. Refer to them whenever you call upon your Sony dealer regarding this product.

Model No._____

Serial No._____

IMPORTANT SAFEGUARDS

For your protection, please read these instructions completely, and keep this manual for future reference.

Carefully observe and comply with all warnings, cautions and instructions placed on the set or described in the operating instructions or service manual.

WARNING

To guard against injury, the following basic safety precautions should be observed in the installation, use and servicing of the set.

Use

Power Sources

This set should be operated only from the type of power source indicated on the serial/model plate. If you are not sure of the type of electrical power supplied to your home, consult your dealer or local power company. For those sets designed to operate from battery power, refer to the operating instructions.

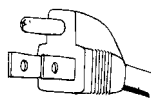
Grounding or Polarization

This set is equipped with a polarized AC power cord plug (a plug having one blade wider than the other), or with a three-wire grounding type plug (a plug having a third pin for grounding). Follow the instructions below:

For the set with a polarized AC power cord plug

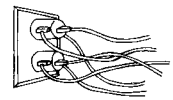
This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug still fails to fit, contact your electrician to have a suitable outlet installed. Do not defate the safety purpose of the polarized plug by forcing it in.

For the set with a three-wire grounding type AC plug



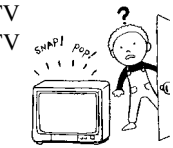
This plug will only fit into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to have a suitable outlet installed. Do not defeat the safety purpose of the grounding plug.

Overloading



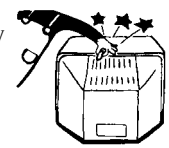
Do not overload wall outlets, extension cords or convenience receptacles beyond their capacity, since this can result in fire or electric shock.

Always turn the set off when it is not being used. When the set is left unattended and unused for long periods of time, unplug it from the wall outlet as a precaution against the possibility of an internal malfunction that could create a fire hazard.



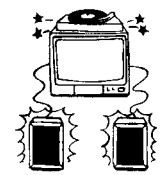
If a snapping or popping sound from a TV set is continuous or frequent while the TV is operating, unplug the TV and consult your dealer or service technician. It is normal for some TV sets to make occasional snapping or popping sounds, particularly when being turned on or off.

Object and Liquid Entry



Never push objects of any kind into the set through the cabinet slots as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the set.

Attachments



Do not use attachments not recommended by the manufacturer, as they may cause hazards.

Cleaning

Clean the cabinet of the projection TV with a dry soft cloth. To remove dust from the screen, wipe it gently with a soft cloth. Stubborn stains may be removed with a cloth slightly dampened with solution of mild soap and warm water. Never use strong solvents such as thinner or benzine for cleaning.

If the picture becomes dark after using the projection TV for a long period of time, it may be necessary to clean the inside of the projection TV. Consult qualified service personnel.

Installation

Water and Moisture

Do not use power-line operated sets near water — for example, near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, etc.

Accessories

Do not place the set on an unstable cart, stand, table or shelf. The set may fall, causing serious injury to a child or an adult and serious damage to the set. Use only a cart or stand recommended by Sony for the specific model of TV. No part of the TV set should overhang any edge of the TV cart or stand; any overhanging edge is a safety hazard. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

Ventilation

The slots and openings in the cabinet and in the back or bottom are provided for necessary ventilation. To ensure reliable operation of the set, and to protect it from overheating, these slots and openings must never be blocked or covered.

- Never cover the slots and openings with a cloth or other materials.

- Never block the slots and openings by placing the set on a bed, sofa, rug or other similar surface.

- Never place the set in a confined space, such as a bookcase or built-in cabinet, unless proper ventilation is provided.

- Do not place the set near or over a radiator or heat register, or where it is exposed to direct sunlight.

Power-Cord Protection

Do not allow anything to rest on or roll over the power cord, and do not place the set where the power cord is subject to wear or abuse.

Antennas

Outdoor Antenna Grounding

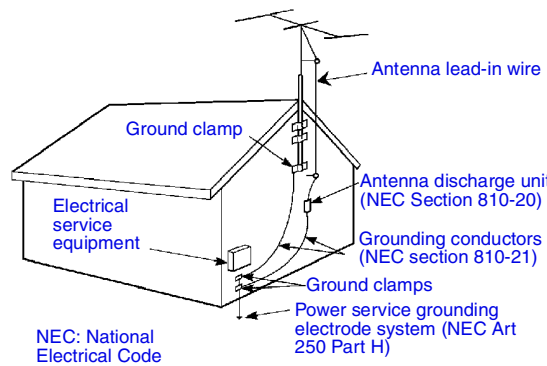
If an outdoor antenna is installed, follow the precautions below. An outdoor antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can come in contact with such power lines or circuits.

WHEN INSTALLING AN OUTDOOR ANTENNA SYSTEM, EXTREME CARE SHOULD BE TAKEN TO KEEP FROM CONTACTING SUCH POWER LINES OR CIRCUITS AS CONTACT WITH THEM IS ALMOST INVARIABLY FATAL.

Be sure the antenna system is grounded so as to provide some protection against voltage surges and built-up static charges.

Section 810 of the National Electrical Code (NEC) in USA and Section 54 of the Canadian Electrical Code in Canada provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.

Antenna Grounding According to the National Electrical Code, ANSI/NFPA 70



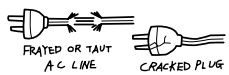
Lightning

For added protection for this television receiver during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna. This will prevent damage to the receiver due to lightning and power-line surges.

Service

Damage Requiring Service

Unplug the set from the wall outlet and refer servicing to qualified service personnel under the following conditions:



- When the power cord or plug is damaged or frayed.
- If liquid has been spilled into the set.
- If the set has been exposed to rain or water.
- If the set has been subject to excessive shock by being dropped, or the cabinet has been damaged.

- If the set does not operate normally when following the operating instructions. Adjust only those controls that are specified in the operating instructions. Improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the set to normal operation.
- When the set exhibits a distinct change in performance, it indicates a need for service.

Servicing

Do not attempt to service the set by yourself since opening the cabinet may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

Replacement Parts

When replacement parts are required, be sure the service technician certifies in writing that he has used replacement parts specified by the manufacturer that have the same characteristics as the original parts.

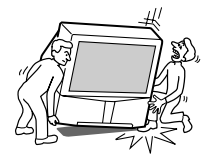
Unauthorized substitutions may result in fire, electric shock or other hazards.

Safety Check

Upon completion of any service or repairs to the set, ask the service technician to perform routine safety checks (as specified by the manufacturer) to determine that the set is in safe operating condition, and to so certify. When the set reaches the end of its useful life, improper disposal could result in a picture tube implosion. Ask a qualified service technician to dispose of the set.

For Safety

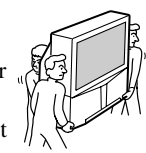
Be careful when moving the projection TV



When you place the projection TV in position, be careful not to drop it on your foot or fingers.

Watch your footing while installing the projection TV.

Carry the projection TV in the specified manner



If you carry the projection TV in a manner other than the specified manner and without the specified number of persons, it may drop and a serious injury may be caused. Be sure to follow the instructions mentioned below.

- Carry the projection TV with the specified number of persons. (see page 11)
- Do not carry the projection TV holding the speaker grill.
- Hold the projection TV tightly when carrying it.
- Model KP-65WS500 has handles that you can use to carry the unit.

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Introducing the Sony Projection TV

Presenting the Sony Projection TV

Thank you for purchasing the Sony Projection TV.
This manual is for models KP-51WS500, KP-57WS500, and KP-65WS500.
KP-51WS500 is used for illustration purposes.

Features

Some of the features that you will enjoy with your new projection TV include:

- **Hi Scan 1080™**: Enables you to receive the 1080i, 720p, 480p and 480i digital TV formats. By using the VIDEO 5/6/7 IN jacks, you can connect a DTV (digital television) receiver to view DTV programs.
- **DRC™ Multi-Function:** Unlike conventional line doublers, the DRC feature doubles vertical and horizontal lines, resulting in four times the density for quality sources such as DVD, Satellite and Digital camcorder.
- **CineMotion™:** Using the 2-3 Pull-Down technology, the CineMotion feature allows you to obtain a smooth picture movement when playing back movies or other video sources on film.
- **Twin View™:** Using Multi-Image Driver (MID-X), Twin View allows you to watch two programs side by side with the ability to zoom in on one picture and listen to the program in the selected window. You can watch pictures from two different sources (1080i, 720p, 480p or 480i) simultaneously.
- **Steady Sound™:** Equalizes volume levels so there is consistent output between programs and commercials.
- **Parental Control:** V-Chip technology allows parents to block unsuitable programming for younger viewers.
- **Component Video Inputs:** Offers the best video quality for DVD (480p, 480i) and Digital Set-top box (1080i, 720p, 480p, 480i) connections.
- **S-VIDEO Inputs:** Provides a high-quality image for connected equipment.
- **Favorite Channel Preview:** Preview up to eight favorite channels without leaving the current channel.
- **Scrolling Channel Index:** Allows you to view and choose channels from scrolling pictures without leaving the current channel.

- **Wide Screen Mode:** Allows you to watch 4:3 normal broadcasts in wide screen mode (16:9 aspect ratio).
- **Auto Wide:** Allows you to select the wide screen mode automatically.
- **Flash Focus**™: Allows you to adjust convergence automatically.
- **Digital Visual Interface (DVI)**: Can accommodate a copyprotected digital connection (HDCP*) to other devices (such as digital set-top boxes) that have compatible interfaces. The DVI-HDTV input terminal is compliant with the EIA-861 standard and is not intended for use with personal computers.

Using this manual

We recommend that you carefully review the contents of the following three sections in the order shown to ensure that you fully understand the operation of your new projection TV.

1 Installing and Connecting the Projection TV

This section guides you through your initial setup. It shows you how to install your projection TV, to connect your new components and to connect the antenna and cable.

2 Using the Features

This section shows you how to begin using your new projection TV. It also shows you how to use your remote control functions.

3 Using the menus

This section teaches you how to access on-screen menus and adjust your projection TV settings.

Instructions in this manual are written for the remote control. Similar controls are also found on the projection TV console.

* High-bandwidth Digital Content Protection

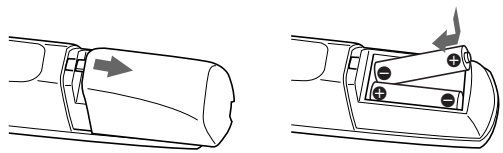
Installing and Connecting the Projection TV

Contents

The box contains your new projection TV, a remote control and two AA batteries. No peripheral cables are included. If you intend to add additional equipment to your projection TV, please check the hookup instructions for your desired setup before you begin. You may need to purchase cables and/or splitters to complete the hookup properly.

Inserting Batteries into the Remote Control

Insert two size AA (R6) batteries (supplied) by matching the + and – on the batteries to the diagram inside the battery compartment.



✍ Remove the batteries to avoid damage from possible battery leakage whenever you anticipate that the remote control will not be used for an extended period.

✍ Handle the remote control with care. Avoid dropping it, getting it wet, or placing it in direct sunlight, near a heater, or where the humidity is high.

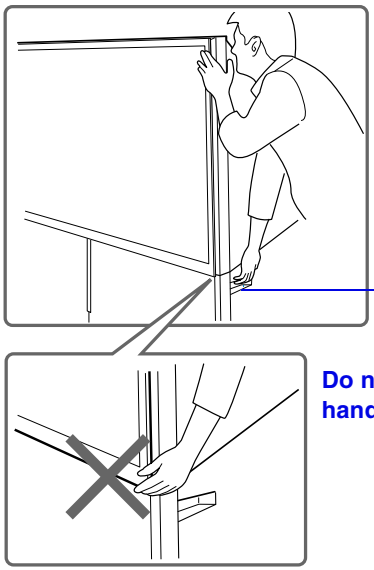
✍ Your remote control can be programmed to operate most video equipment. (See “Programming the Remote Control” on page 68.)

Carrying Your Projection TV

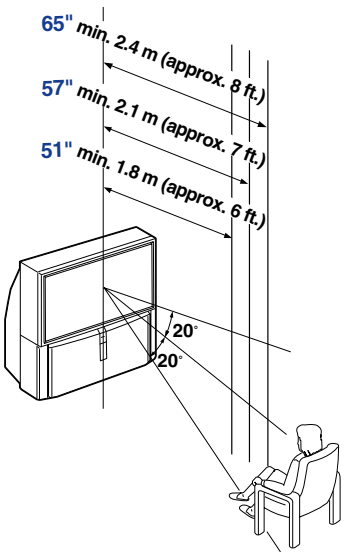
Carrying the projection TV requires three (4) or more people.

The projection TV has been equipped with casters for easy movement on a hard surface.

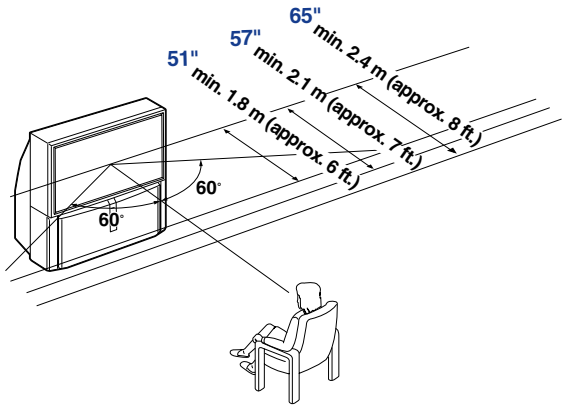
Please move your projection TV using the casters.



Installing the Projection TV



Recommended viewing area (Vertical)



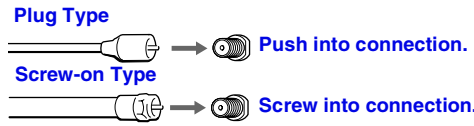
Recommended viewing area (Horizontal)

Connector Types

You may find it necessary to use some of the following connector types during set up.

Coaxial cable

Standard TV cable and antenna cable



S Video cable

High quality video cable for enhanced picture quality

Audio/Video cable

Video - Yellow
Audio (Left) - White
Audio (Right) - Red

Some DVD Players are equipped with the following three video connectors:

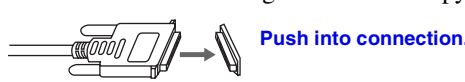
Y - Green
P_B (C_B, C_b or B–Y) - Blue
P_R (C_R, C_r or R–Y) - Red

CONTROL S cable

CONTROL S connections are exclusive to Sony products and allow greater control of all Sony equipment.

DVI cable

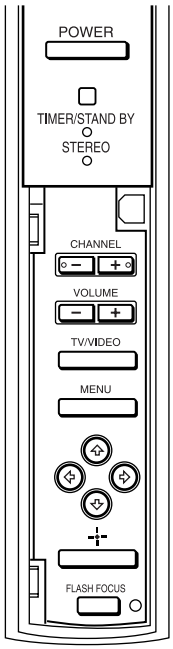
DVI connection for a high-bandwidth copy-protected signal



Projection TV Controls and Connectors

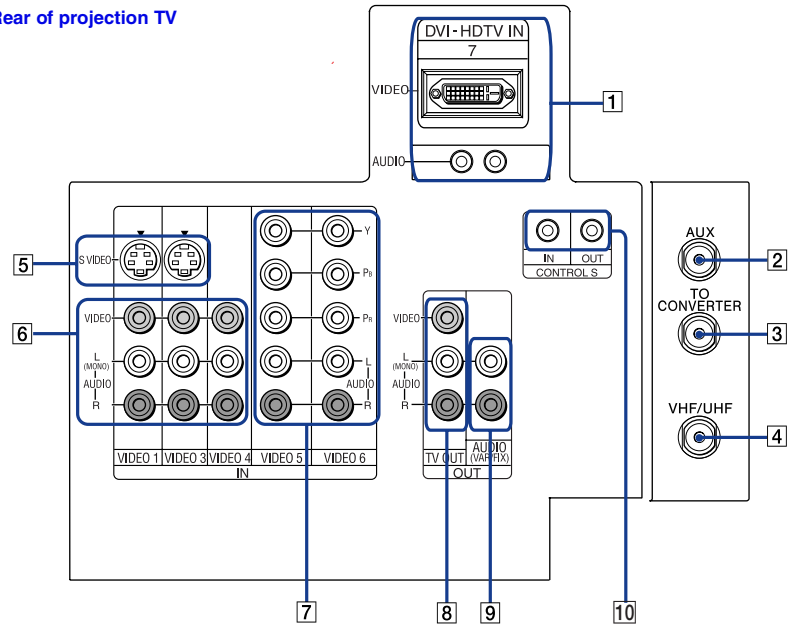
Front Panel Menu Controls

The front panel menu controls allow access to the on-screen menus without the use of a remote control. Pressing MENU brings up the on-screen menus. The arrow buttons move the on-screen cursor in the menus and by pressing the Select button (⊹) selects the menu item.

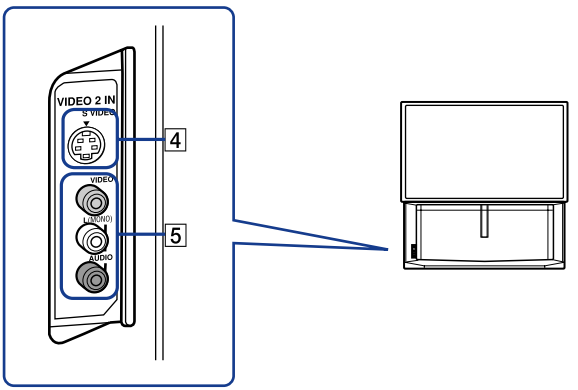


Projection TV Rear and Front Panel Connectors

Rear of projection TV



Front of projection TV



	Connection	Description
1	DVI-HDTV VIDEO AUDIO R/L (VIDEO 7 IN)	Can accommodate a copy-protected digital connection (HDCP*) to other devices (such as digital set-top boxes) that have compatible interfaces. The DVI-HDTV input terminal is compliant with the EIA-861 standard, and is not intended for use with personal computers. See the instruction manual that came with your equipment for details about connecting and using it with the TV.
2	AUX	Allows you to view local and cable channels if your cable provider does not feature local channels. You can switch between local and cable channels easily by pressing ANT on the remote control. Devices connected to the AUX input cannot be viewed in Twin View.
3	TO CONVERTER	This is a VHF/UHF OUT jack that lets you set up your projection TV to switch between scrambled channels (through a cable box) and normal cable channels (CATV). Use this jack instead of a splitter to get better picture quality when switching between scrambled and unscrambled cable channels.
4	VHF/UHF	Connects to your VHF/UHF antenna or cable.
5	S VIDEO (Rear and front)	Connects to the S VIDEO OUT jack of your VCR or other S VIDEO-equipped video component. Provides better picture quality than the VHF/UHF jacks or the Video IN jack.
6	VIDEO (L/R)/AUDIO (Rear and front)	Connects to the audio and video OUT jacks on your VCR or other video component. A fourth video input (VIDEO 2) is located on the front panel of the projection TV.
7	Y/PB/PR (L/R)/AUDIO	Connects to your DVD player's or Digital Set-top box's component video (Y, PB, PR) and audio (L/R) jacks.
8	TV OUT	Connects to an AV receiver for greater control of all audio and video equipment (see page 30). For detailed information about connection, refer to the operating manual supplied with the AV receiver.
9	AUDIO OUT (VAR/FIX) L (MONO)/R	Connects to the left and right audio inputs of your audio or video component.
10	CONTROL S IN/OUT	To control other Sony equipment with the projection TV's remote control, connect the CONTROL S IN jack of the equipment to the CONTROL S OUT jack on the projection TV with the CONTROL S cable. To control the projection TV with a remote control for another Sony product, connect the CONTROL S OUT jack of the equipment to the CONTROL S IN jack on the projection TV with the CONTROL S cable.

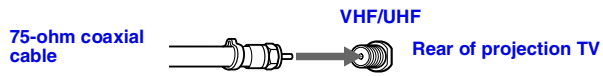
* High-bandwidth Digital Content Protection.

Basic Connections (Connecting Cable TV or Antenna)

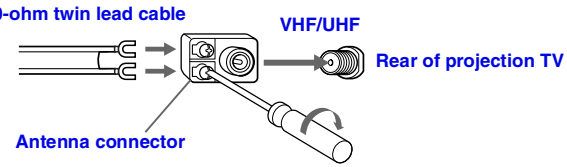
Connecting Directly to Cable or an Antenna

The connection you choose depends on the cable found in your home. Newer homes are equipped with standard coaxial cable (see A); older homes probably have 300-ohm twin lead cable (see B); other homes may contain both (see C).

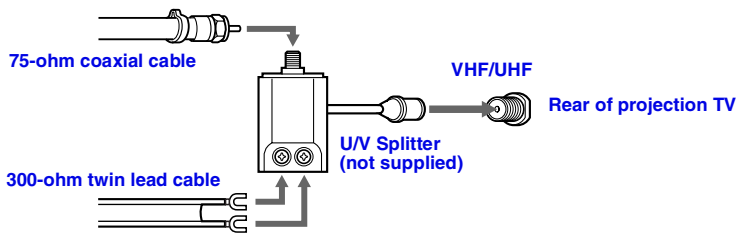
A VHF Only or VHF/UHF or Cable



B VHF Only or UHF Only or VHF/UHF

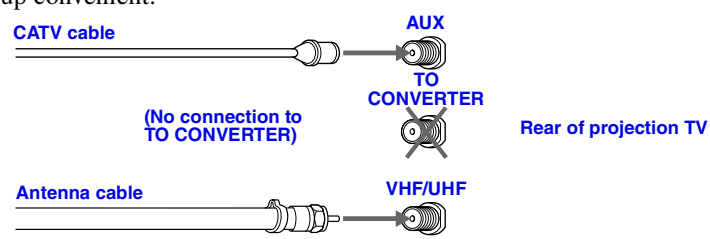


C VHF and UHF



Cable and Antenna

If your cable provider does not feature local channels, you may find this setup convenient.



Select CABLE or antenna (ANT) mode by pressing ANT on the remote control.

✍ To receive channels with an antenna, you need to turn your Cable to OFF (see page 53) and perform the Auto Program function (see page 54).

Cable Box Connections

Cable Box and Cable

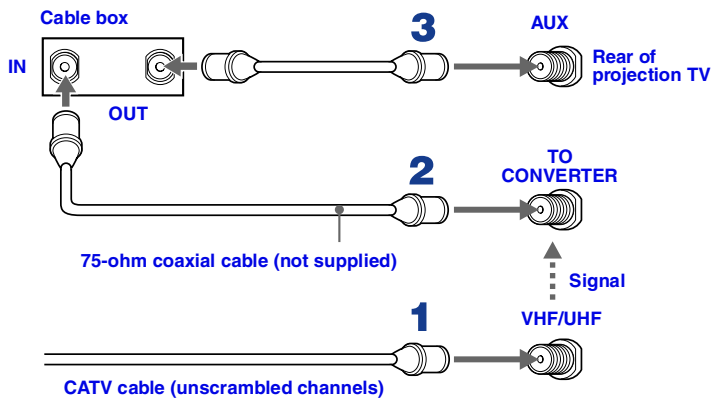
This is the preferred basic cable TV hookup to use if:

- Your cable TV company scrambles some channels, but not all of them (pay channels vs. regular cable channels) and you need to use a cable box, and
- You want to enjoy the Twin View feature.

With this setup you can:

- Use the projection TV remote control to change channels using your cable box when the signal is scrambled.
- Use the projection TV remote control to change channels using your projection TV when the signal is not scrambled. (Your projection TV's tuner provides a better signal than the cable box.)
- Use the Twin View feature. (When all channels are routed through your cable box, only one channel is sent to the projection TV, so you can not use the Twin View or Channel Index features for your cable box.)

1. Connect the Cable TV cable to the projection TV's VHF/UHF jack.
2. Using a coaxial cable, connect the projection TV's TO CONVERTER jack to the cable box's IN jack. The projection TV's internal converter allows you to switch between unscrambled signals coming straight into the projection TV and scrambled signals coming in through the cable box, eliminating the need for an external splitter.
3. Using a coaxial cable, connect the cable box's OUT jack to the projection TV's AUX jack.



✍ Pressing ANT on the remote control switches between the channels coming in through the cable box (scrambled) and those coming directly to the TV (unscrambled).

Cable Box Only

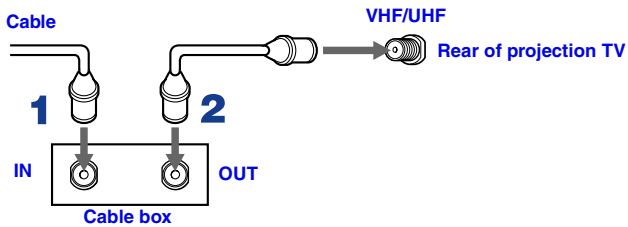
Use this hookup if:

- You subscribe to a cable TV system that uses scrambled or encoded signals requiring a cable box to view all channels, and
- You do not intend to hook up any other audio or video equipment to your projection TV.

When all channels are routed through your cable box, only one unscrambled channel is sent to the projection TV, so you cannot use the Twin View feature. If some channels are scrambled, but others are not, consider using the hookup on page 17 instead.

1 Connect the coaxial connector from your cable service to the cable box's IN jack.

2 Using a coaxial cable, connect the cable box's OUT jack to the TV's VHF/UHF jack.



Also, set Cable to ON in the Channel menu (see page 53).

Setting the Channel Fix feature in the Channel menu (see "Using the Channel Menu" on page 53), ensures that you do not accidentally switch the channels using your projection TV.

✍ Your Sony remote control can be programmed to operate your cable box (see "Programming the Remote Control" on page 68).

✍ To change channels using the cable box, set your projection TV to channel 3 or 4 depending on the cable box channel output. If you will be controlling all channel selection through your cable box, consider using the Channel Fix feature to set your projection TV to channel 3 or 4 (see page 54).

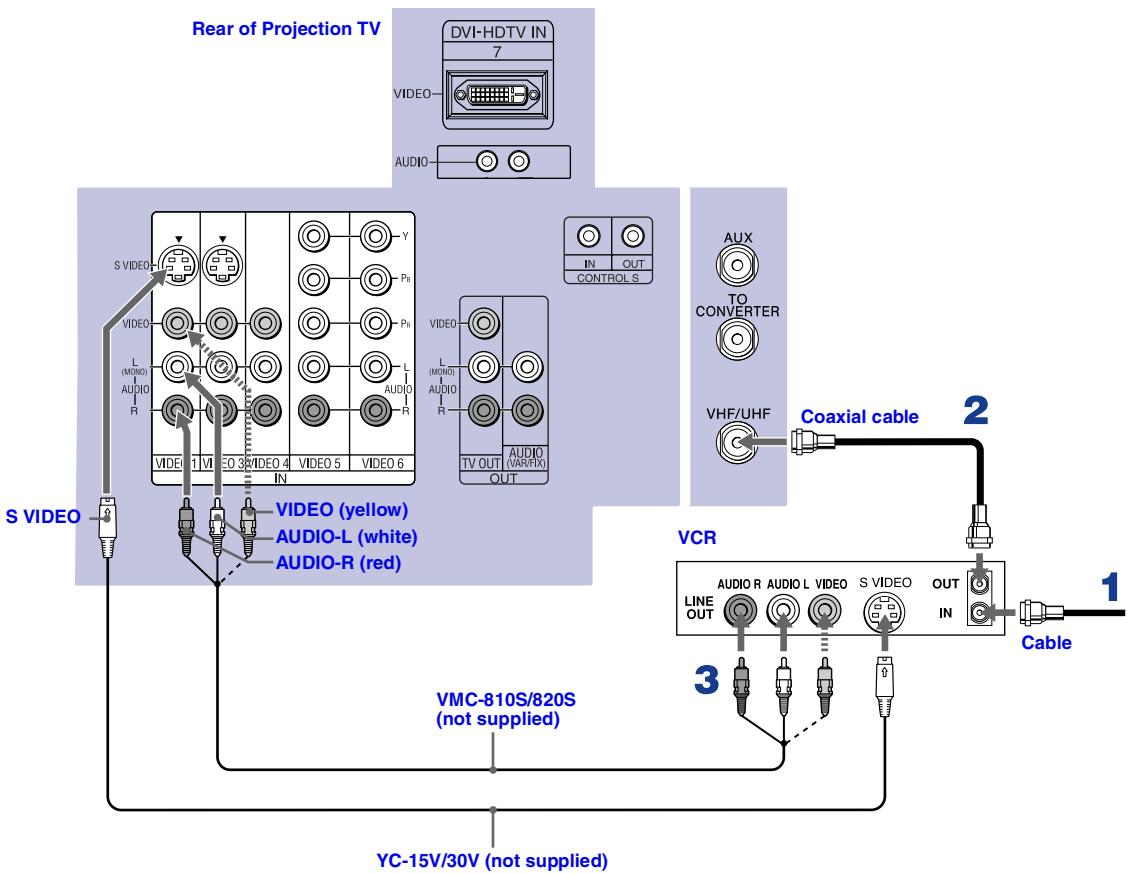
Connecting a VCR and Cable

Use this hookup if:

- You have cable TV that does not require a cable box.

Disconnect all power sources before making any connections.

1. Connect the cable TV cable to the VCR's IN jack.
2. Using a coaxial cable, connect the VCR's OUT jack to the projection TV's VHF/UHF jack.
3. Using AUDIO and S VIDEO cables, connect the VCR's Audio and S Video OUT jacks to the projection TV's AUDIO and S VIDEO IN jacks.



If your VCR is not equipped with S VIDEO, use a VIDEO cable (yellow) instead of the S VIDEO cable.

Connecting a VCR and Cable Box

Use this hookup if:

- Your cable TV company scrambles some channels, but not all of them (pay channels vs. regular cable channels) and you need to use a cable box, and
- You want to enjoy the Twin View feature.

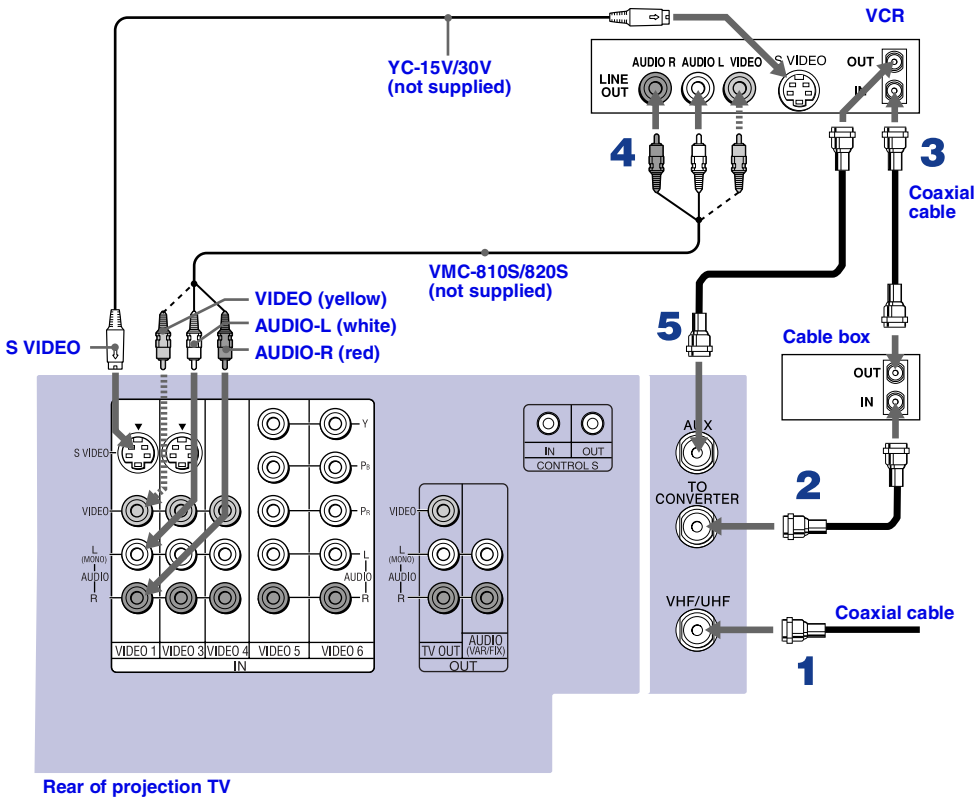
With this setup you can:

- Use the projection TV remote control to change channels on your cable box when the signal is scrambled. To program your Sony remote control to operate your cable box, see “Programming the Remote Control” on page 68.
- Use the projection TV remote control to change channels using your projection TV when the signal is not scrambled. Your projection TV’s tuner provides a better signal than the cable box.
- Use the Twin View feature. (When all channels are routed through your cable box, only one signal is sent to the projection TV, so you cannot use the Twin View feature.)

Disconnect all power sources before making any connections.

1. Connect the Cable TV cable to the projection TV’s VHF/UHF jack.
2. Using a coaxial cable, connect the TV’s TO CONVERTER jack to the cable box’s IN jack. The projection TV’s internal converter allows you to switch between unscrambled signals coming straight into the projection TV and scrambled signals coming in through the cable box, eliminating the need for an external splitter.
3. Using a coaxial cable, connect the cable box’s OUT jack to the VCR’s IN jack.
4. Using AUDIO and S VIDEO cables, connect the VCR’s AUDIO and S VIDEO OUT jacks to the projection TV’s AUDIO and S VIDEO IN jacks.
5. Using a coaxial cable, connect the VCR’s OUT jack to the projection TV’s AUX jack.

✍ To view scrambled channels, set your projection TV to AUX 3 or 4 (depending on your cable box output). Change channels using your cable box.



✍ If your VCR is not equipped with S VIDEO, use a VIDEO cable (yellow) instead of the S VIDEO cable.

✍ You will not be able to change channeles on the VCR. Set your projection TV and VCR to channel 3 or 4, depending on your cable box channel output.

✍ Pressing ANT on the remote control switches between the channels coming in through the cable box (scrambled) and those coming directly to the projection TV (unscrambled).

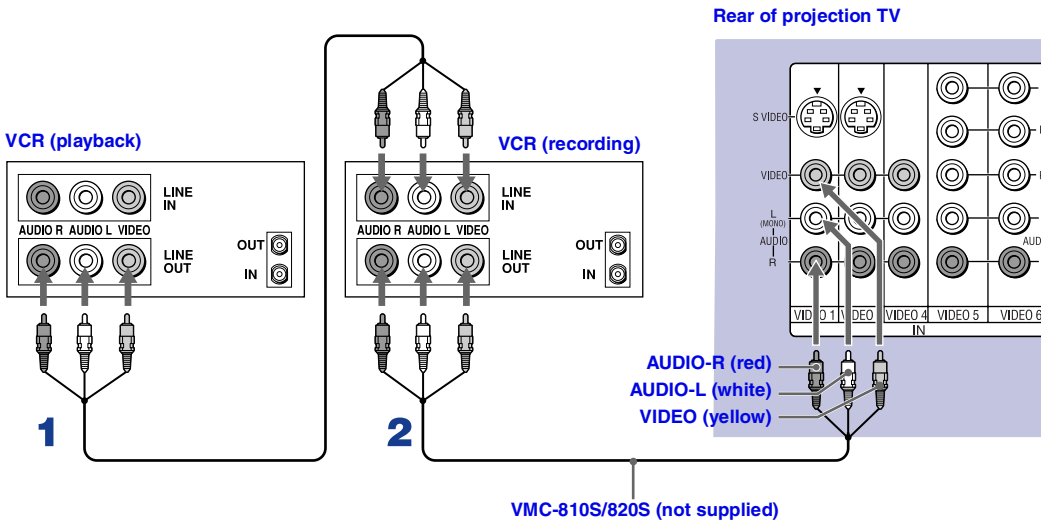
Connecting Two VCRs for Tape Editing

If you connect two VCRs, you can record from one VCR to the other while using your projection TV to monitor what is being recorded.

Disconnect all power sources before making any connections.

1 Using AUDIO and VIDEO cables, connect the playback VCR's Audio and Video OUT jacks to the recording VCR's Audio and Video IN jacks.

2 Using AUDIO and VIDEO cables, connect the recording VCR's AUDIO and Video OUT jacks to the projection TV's AUDIO and VIDEO IN jacks.



✍ To perform tape editing, set the projection TV to the video input intended for playback by pressing TV/VIDEO on the remote control.

✍ You may need to change the video input on your VCR. Consult your VCR's operating manual for instructions.

✍ If your VCRs have an S VIDEO jack: For best picture quality, use an S VIDEO connection instead of the yellow video cable on your combined A/V cable.
Using an S VIDEO cable, connect the playback VCR's S VIDEO OUT jack to the recording VCR's S VIDEO IN jack. S VIDEO does not provide audio, so audio cables must be connected to provide sound.

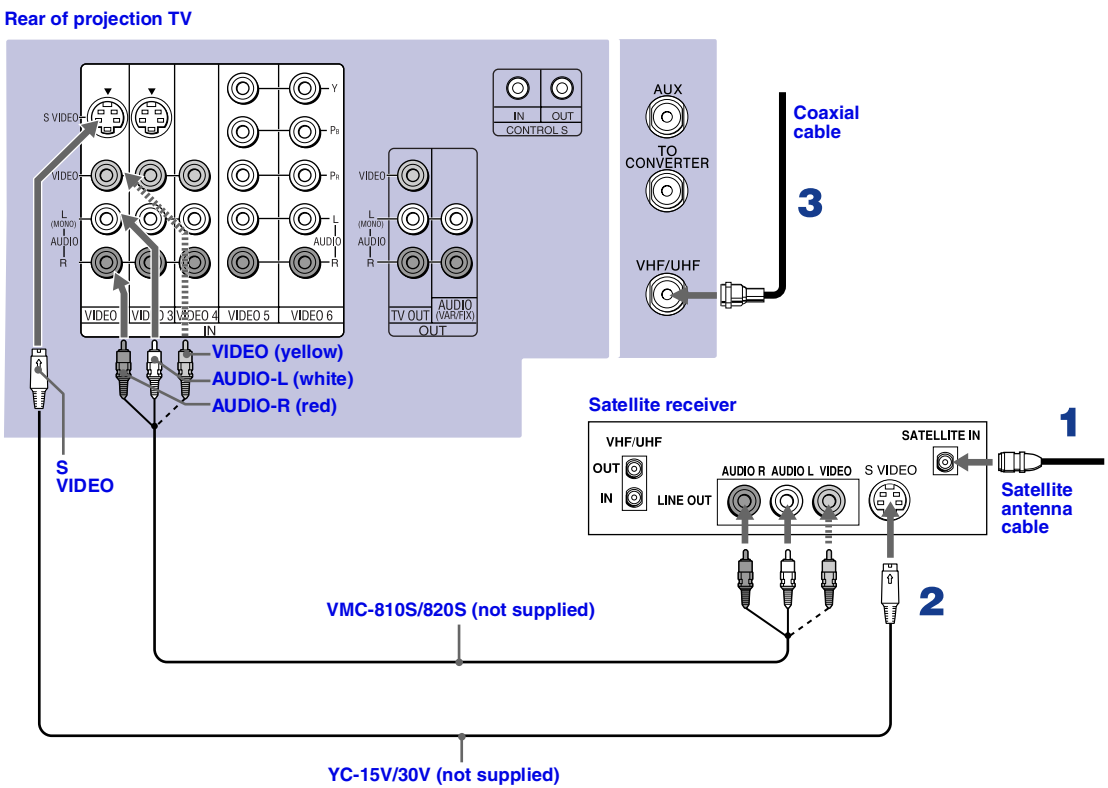
✍ You cannot record signals from equipment connected to the Y, P_B, P_R input.

Connecting a Satellite Receiver

Disconnect all power sources before making any connections.

1. Connect the satellite antenna cable to the satellite receiver's SATELLITE IN jack.
2. Using AUDIO and S VIDEO cables, connect the satellite receiver's AUDIO and S VIDEO OUT jacks to the projection TV's AUDIO and S VIDEO IN jacks.
3. Connect a coaxial cable from your cable or antenna to the projection TV's VHF/UHF jack.

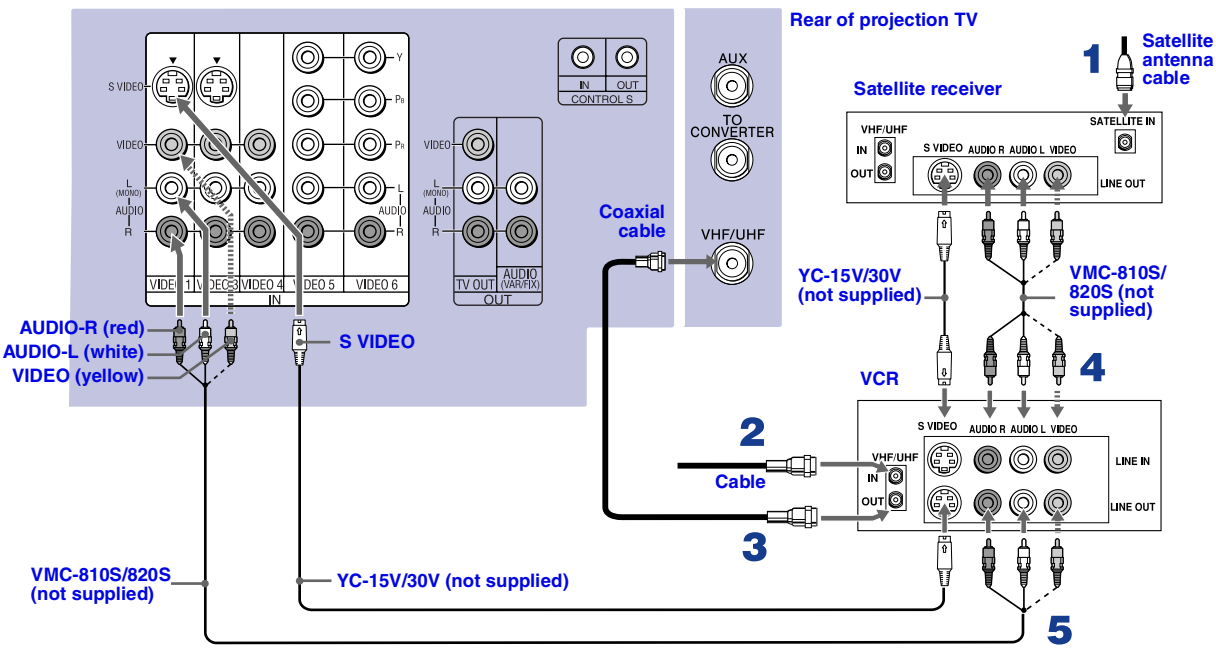
✍ If your satellite receiver is not equipped with S VIDEO, use a VIDEO cable (yellow) instead of the S VIDEO cable.



Connecting a Satellite Receiver with a VCR

Disconnect all power sources before making any connections.

1. Connect the satellite antenna cable to the satellite receiver's SATELLITE IN jack.
2. Connect the CATV cable to the VCR's VHF/UHF IN jack.
3. Using a coaxial cable, connect the VCR's OUT jack to the projection TV's VHF/UHF jack.
4. Using AUDIO and S VIDEO cables, connect the satellite receiver's AUDIO and S VIDEO OUT jacks to the VCR's AUDIO and S VIDEO IN jacks.
5. Using AUDIO and S VIDEO cables, connect the VCR's AUDIO and S VIDEO OUT jacks to the TV's AUDIO and S VIDEO IN jacks.



✍ Be sure your VCR's video input is set correctly. Consult your VCR's operating manual for instructions.

✍ Use TV/VIDEO to select
- VIDEO 1 to watch satellite TV or the VCR (your VCR must be turned on).
- VHF/UHF to watch cable TV.

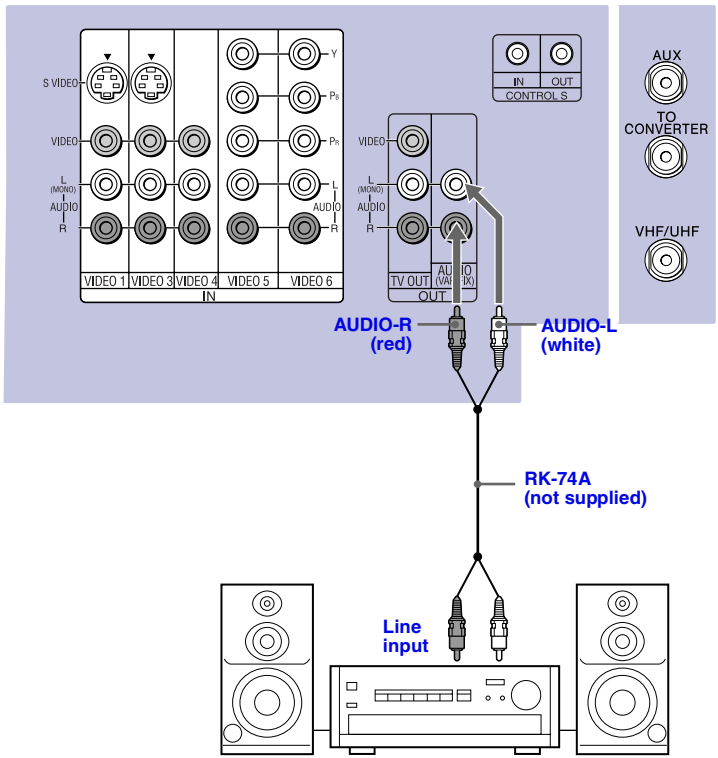
✍ If your VCR or satellite receiver is not equipped with S VIDEO, use a VIDEO cable (yellow) instead of the S VIDEO cable.

Connecting an Audio Receiver

Disconnect all power sources before making any connections.

Using audio cables, connect the projection TV's AUDIO OUT (VAR/FIX) jacks to the audio receiver's audio LINE IN jacks.

Rear of projection TV



Connecting a DVD Player with Component Video Connectors

This is the preferred hookup to use if:

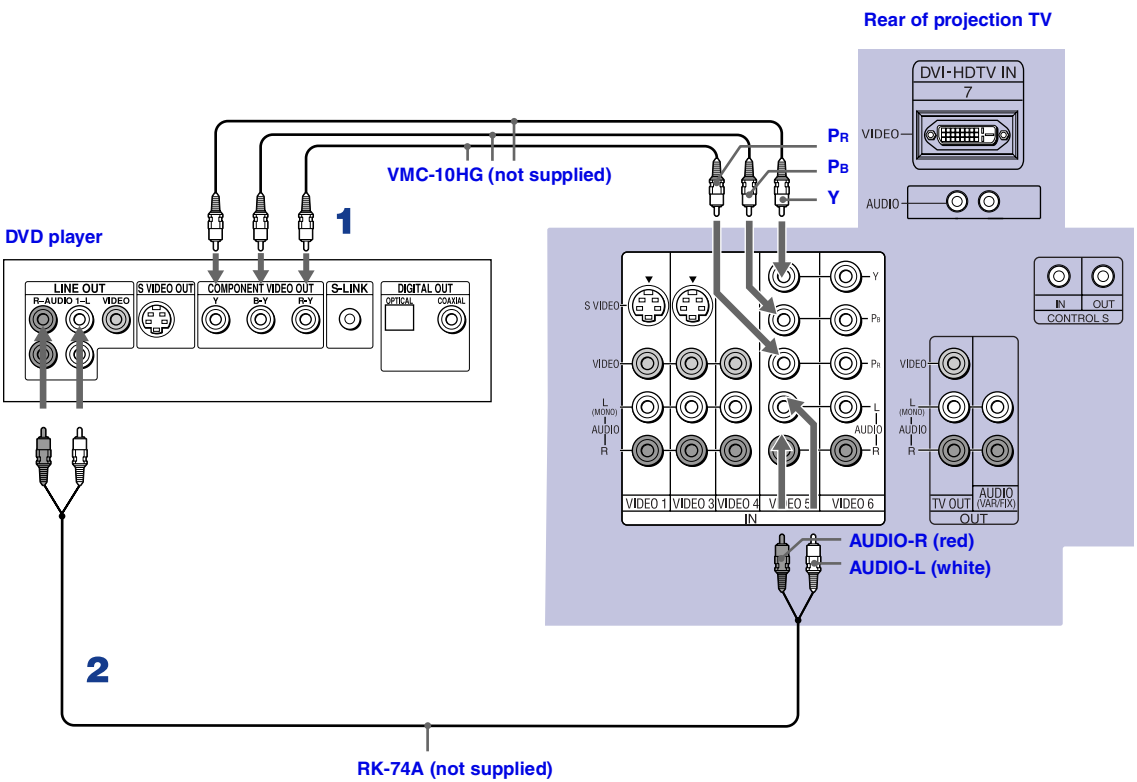
- Your DVD player has component (Y, B-Y, R-Y) jacks.

Disconnect all power sources before making any connections.

1 Using three separate component video cables, connect the DVD player's Y, B-Y and R-Y jacks to the Y, P_B and P_R jacks on the projection TV. Use the VIDEO IN 5 or 6 connections.

> ✍ The Y, B-Y and R-Y jacks on your DVD player are sometimes labeled Y, C_B and C_R, or Y, P_B and P_R. If so, connect the cables to like colors.

2 Using an audio cable, connect the DVD player's Audio OUT jacks to the projection TV's AUDIO IN jacks. Be sure to use the same row of inputs that you used for the video connection (VIDEO IN 5 or 6).



Connecting a DVD Player with A/V Connectors

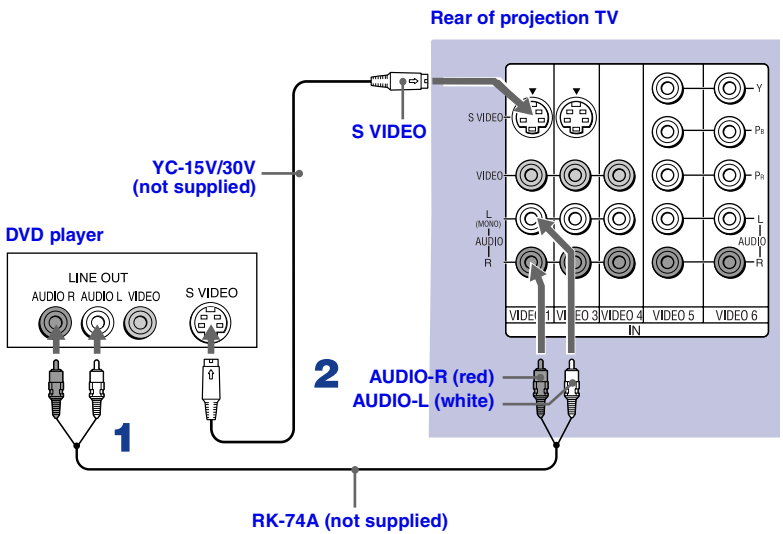
Use this hookup if:

- Your DVD player does not have component (Y, PB, PR) jacks.

✍ If your DVD player has video component output connectors: for best picture quality use the connection described on page 26.

Disconnect all power sources before making any connections.

1. Using audio cables, connect the DVD player's Audio OUT jacks to the projection TV's AUDIO IN jacks.
2. Using an S VIDEO cable, connect the DVD player's S VIDEO jack to the projection TV's S VIDEO jack.



✍ Use TV/VIDEO on the remote control to switch between the VCR, DVD player and cable TV inputs.

✍ If your VCR is not equipped with S VIDEO, use a VIDEO cable (yellow) instead of the S VIDEO cable.

Connecting a Digital TV Receiver

Be sure to read the Set-top box manual.

Some Digital TV Receivers are equipped with a DVI connection. Refer to your Digital TV Receiver manual for setup instructions using this connection.

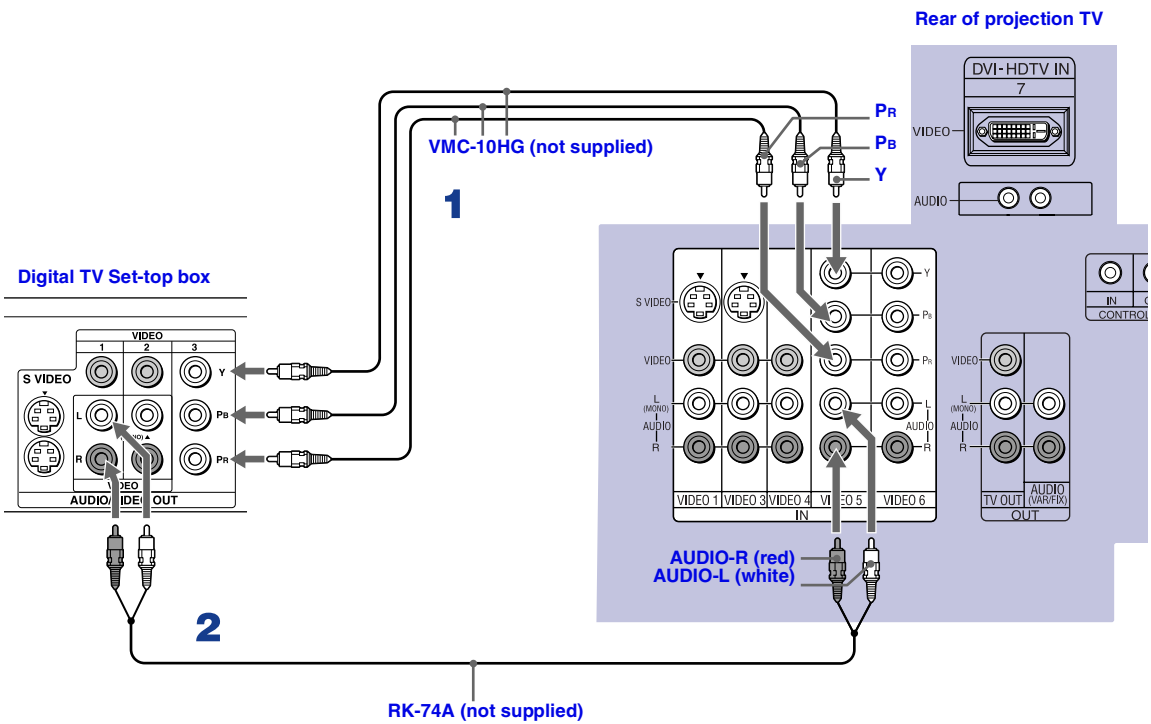
Disconnect all power sources before making any connections.

1 Using three separate component video cables, connect the Digital TV Set-top box's Y, PB and PR jacks to the projection TV.

✍ The Y, PB and PR jacks do not provide audio, so audio cables must be connected to provide sound.

✍ Component video connection is necessary to view 480p, 720p, and 1080i formats. You may also use the S VIDEO or Composite Video connections, however, component video (Y, PB, PR) will provide the best picture quality for all format types.

2 Using an audio cable, connect the Digital TV Set-top box's Audio OUT jacks to the projection TV's AUDIO IN jacks.



✍ You cannot record the signal from any equipment connected into the Y, PB and PR connectors.

✍ This projection TV is not compatible with digital TV receivers configured with RGB or VGA output connectors.

✍ The DVI connection is compliant with the EIA-861 standard and is not intended for use with personal computers.

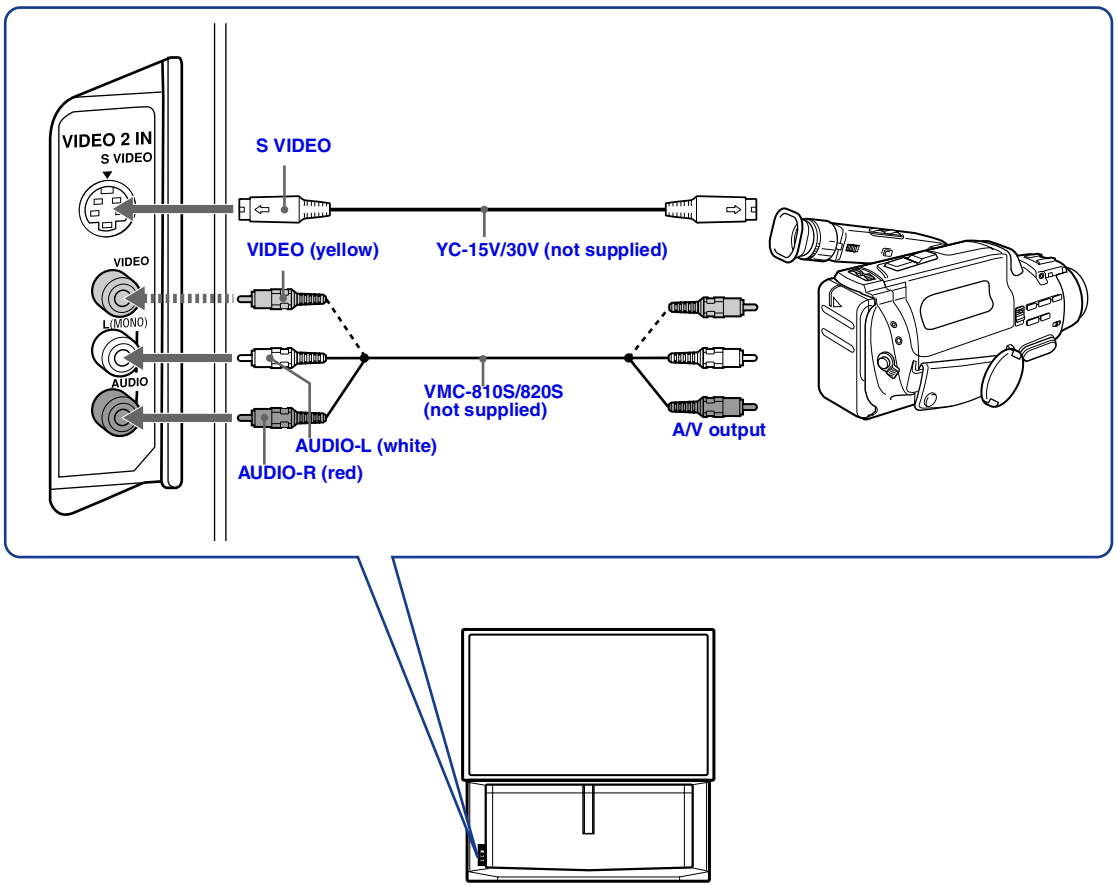
Connecting a Camcorder

For easy connection of the camcorder, the projection TV has front Audio and Video inputs (shown below). However, if you prefer, you can also connect the camcorder to the projection TV's rear Audio and Video IN jacks.

Using AUDIO and S VIDEO cables, connect the camcorder's Audio and S VIDEO OUT jacks to the projection TV's AUDIO and S VIDEO IN jacks.

✍ If you have a mono camcorder, connect its left audio output to the projection TV's AUDIO L (MONO) jack.

✍ If your camcorder is not equipped with S VIDEO, use a VIDEO cable (yellow) instead of the S VIDEO cable.



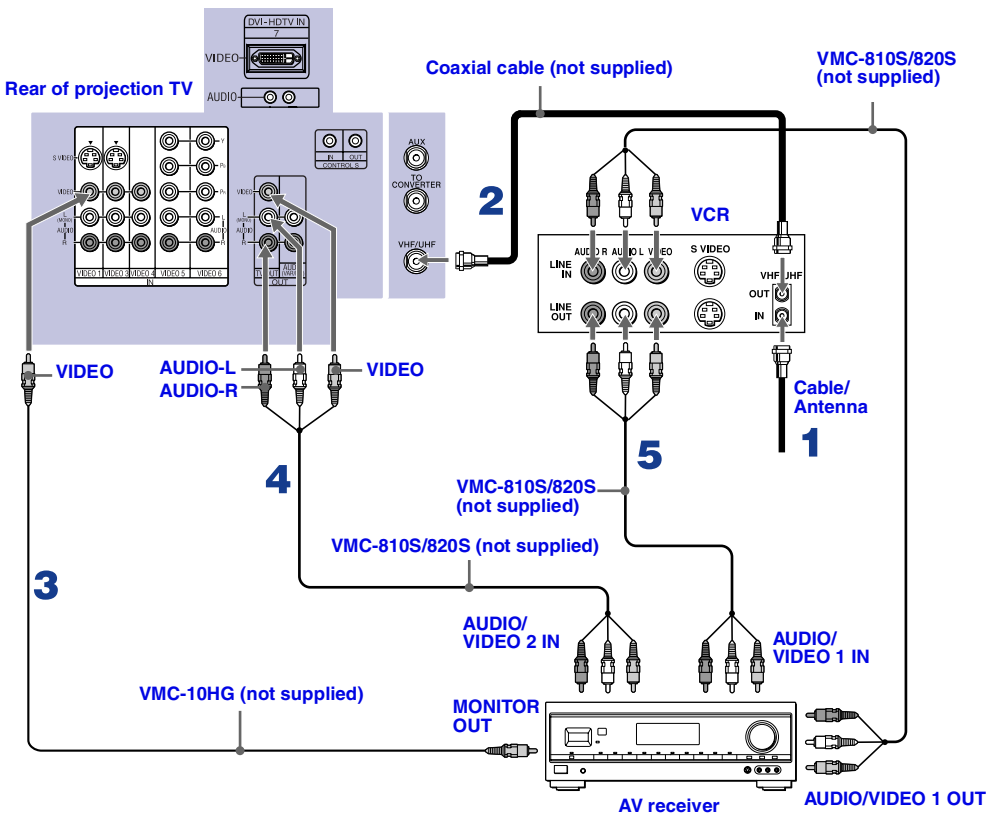
Connecting an AV Receiver

For greater control of all audio and video equipment, connect an AV receiver.

✍ Change “Video Label” for the VIDEO 1 input to “Receiver” (see page 59).

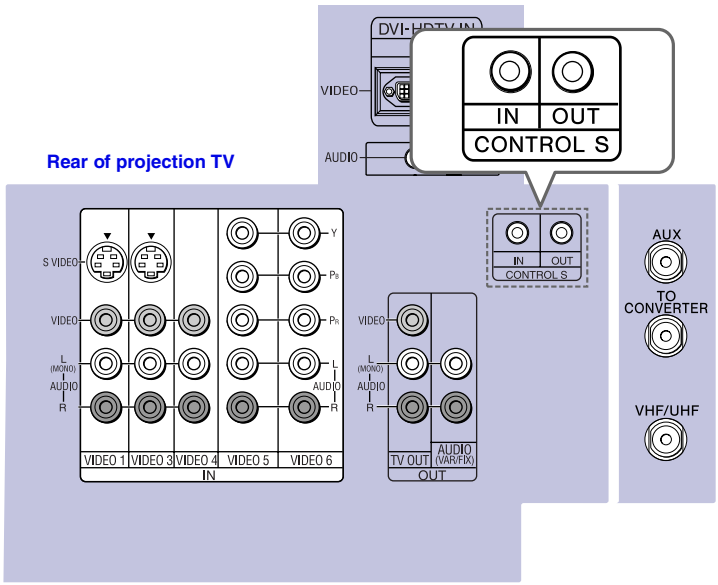
Disconnect all power sources before making any connections.

1. Connect the coaxial cable from the incoming cable connection or antenna to IN on the VCR.
2. Using a coaxial cable, connect OUT on the VCR to VHF/UHF on the projection TV.
3. Using a VIDEO cable, connect VIDEO of VIDEO 1 IN on the projection TV to MONITOR OUT on the AV receiver.
4. Using an AUDIO/VIDEO cable, connect TV OUT on the projection TV to AUDIO/VIDEO 2 IN on the AV receiver.
5. Using an AUDIO/VIDEO cable, connect the video equipment to the AV receiver.
6. Select the Setup menu and set “Video Label” to “Receiver” to fix your TV’s input to AV receiver (see “Video Label” on page 59).



Using the CONTROL S Feature

CONTROL S allows you to control your projection TV system and other Sony equipment with one remote control. In addition to allowing you to control multiple devices with one remote control, the CONTROL S feature allows you to always point your remote control at your projection TV, instead of having to point it at the other equipment, which might be hidden or out of direct line of sight.



Setting Up the Projection TV Automatically

After you finish connecting your projection TV, you can run Auto Setup to set up your channels. The Auto Setup screen appears when you turn your projection TV on for the first time after installing it. If you do not want to set up the channels at this time, you can do it later by using the Auto Program feature in the Channel menu (see page 54).

✍ The Auto Setup feature does not apply for installations that use a cable box for all channel selection.

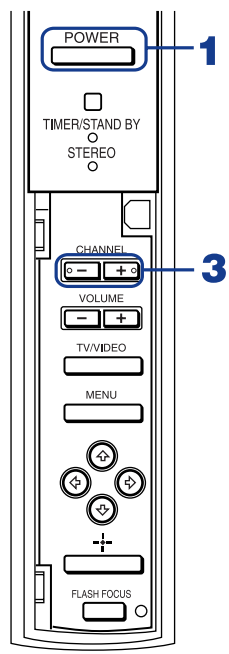
Using Auto Setup

1 Press POWER on the front panel of your projection TV or on the remote control to turn on the projection TV.

2 Press the TV (FUNCTION) button on your remote control. Red light will briefly appear.

3 Press CH+ on your projection TV to run Auto Setup, or press CH– to exit. If you use the channel buttons on your remote control, be sure to use the main set of buttons (CH +/–).

Projection TV front panel



✍ You can run Auto Program by selecting it in the Channel menu, as described on page 54.

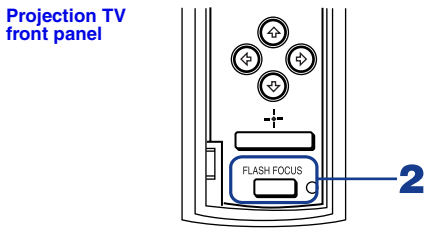
Adjusting the Convergence Automatically – FLASH FOCUS™ –

The projection tube image appears on the screen in three colors (red, green and blue). If they do not converge, the color is poor and the picture blurs.

Before you use your projection TV, be sure to adjust the convergence.

The FLASH FOCUS feature allows you to adjust the convergence automatically.

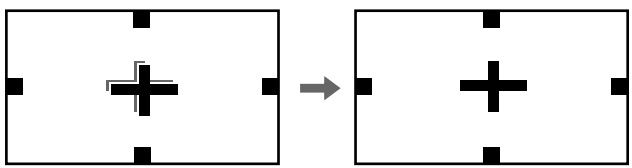
✍ It is recommended to perform FLASH FOCUS about 30 minutes after the projection TV is first turned on.



1 Receive a TV or cable TV program.

2 Press FLASH FOCUS.

The cross pattern shown below appears and FLASH FOCUS begins to work. The adjustment is completed when the cross pattern becomes white and you are returned to the program you were watching.



✍ You cannot perform any other functions until FLASH FOCUS has completed its cycle.

✍ If you perform any other operation while FLASH FOCUS is in progress, FLASH FOCUS operation is canceled.

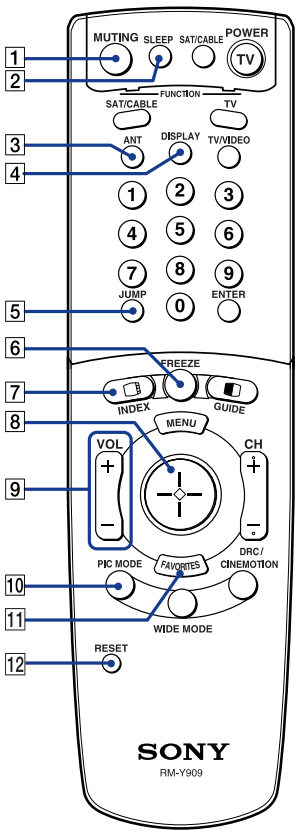
✍ Unshielded speakers or other metallic objects can cause picture distortion if placed close to the projection TV.

Using the Features

Using the Remote Control

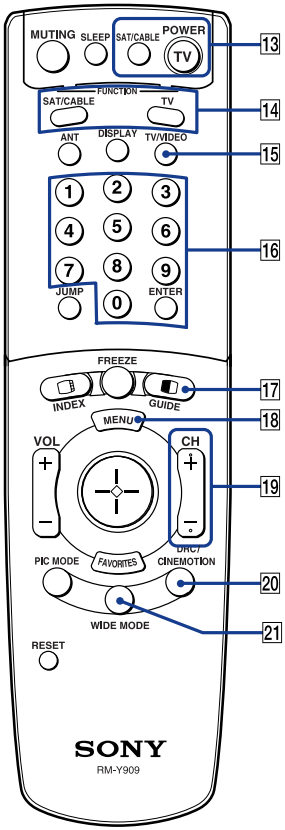
The following table describes the buttons on the remote control that are for more advanced functions.

Button Descriptions



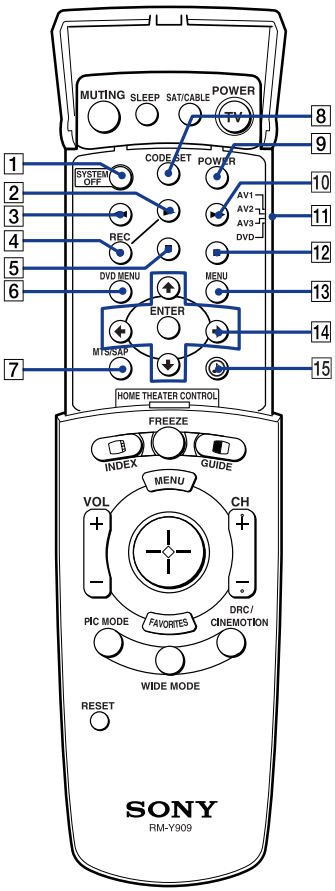
Outside Panel

Button	Description
1 MUTING	Press to mute the sound. Press again or press VOL + to restore the sound.
2 SLEEP	Press repeatedly until the projection TV displays the time in minutes (15, 30, 45, 60, or 90) that you want the projection TV to remain on before shutting off automatically. Cancel by pressing until SLEEP OFF appears or turning the power off. While the Sleep feature is set, press once to view the remaining time.
3 ANT	Changes between the VHF/UHF input and the AUX input.
4 DISPLAY	Press once to display the current time and channel label (if set) and channel number. Press again to turn Display off. See page 57 for details on setting the time.
5 JUMP	Press to jump back and forth between two channels. The projection TV alternates between the current channel and the last channel that was selected.
6 FREEZE	Freezes the window picture. Press again to restore the picture.
7 INDEX	Press to enter the Scrolling Channel Index mode. You can view and select from all receivable channels scrolling on the screen without leaving the current one.
8	The joystick allows for movement of the on-screen cursor. Pressing down on the center of the joystick selects the item.
9 VOL +/–	Adjusts the volume.
10 PIC MODE	Press repeatedly to step through the available video picture modes: Vivid, Standard, Movie and Pro. Also available in the Video menu. For details, see “Selecting Video Options” on page 49.
11 FAVORITES	Displays the Favorite Channels list. For details, see “Using Favorite Channels” on page 40.
12 RESET	Press when in a menu to reset the settings to the factory defaults.



	Button	Description
13	POWER buttons (GREEN)	Turn on and off the projection TV and other audio/video equipment you have programmed into the remote control. For instructions, see “Programming the Remote Control” on page 68.
14	FUNCTION buttons	Select the equipment (TV, SAT/CABLE) that you want to operate. The indicator lights up momentarily when pushed to show which device the remote control is operating.
15	TV/VIDEO	Cycles through the video equipment connected to your projection TV’s video inputs: TV, VIDEO 1, VIDEO 2, VIDEO 3, VIDEO 4, VIDEO 5, VIDEO 6 and VIDEO 7.
16	0 – 9 and ENTER	Press 0 - 9 to select a channel, the channel changes after 2 seconds. Press ENTER to select immediately.
17		Turns on/off Twin View. For details, see “Using Twin View™” on page 41.
	GUIDE	Displays the program guide of your satellite.
18	MENU	Press to display the projection TV on-screen menu. Press again to exit from the menu.
19	CH +/–	Scan through channels.
20	DRC/ CINEMOTION	Press repeatedly to step through the available high-resolution picture modes: Interlaced, Progressive and CineMotion. For details, see “Using the Video Menu” on page 49.
21	WIDE MODE	Press to step through the wide screen modes: Wide Zoom, Normal, Full and Zoom. For details, see “Using Wide Screen Mode” on page 47.

To scan rapidly through the channels, press and hold down CH+ or CH–.



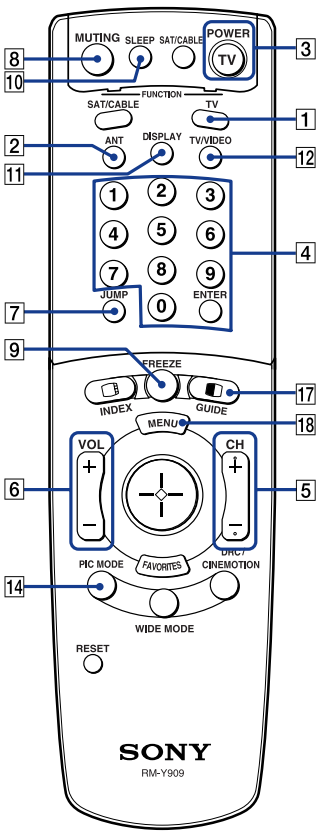
Inside Panel

Button	Description
1 SYSTEM OFF	Press to turn off the projection TV and all equipment connected with S-Link.
2 ►	Play
3 ◄◄	Rewind
4 REC	Record
5 ■	Stop
6 DVD MENU	Displays the DVD menu.
7 MTS/SAP	Press to scroll through the Multi-channel TV Sound (MTS) options: Stereo, Auto SAP, and Mono.
8 CODE SET	Used for programming the remote control to operate non-Sony video equipment. For details, see “Programming the Remote Control” on page 68.
9 POWER	Press to turn on the DVD/VCR player you have programmed into the remote control. For instructions, see “Programming the Remote Control” on page 68.
10 ►►	Fast-forward
11 AV1 AV2 AV3 DVD	Use to switch control for connected video equipment. You can program one video source for each switch position. For details, see “Programming the Remote Control” on page 68.
12 ❚❚	Pause (Press again to resume normal playback)
13 MENU	Displays the Video equipment menu.
14 ↑, ↓, ←, →, and ENTER	Use to operate the DVD menu.
15 ♪	Press to select an audio option: Steady Sound ON or OFF.

Watching the TV

Many TV features can be accessed directly through the remote control. The following will explain the function of some of the buttons found on your remote control.

Buttons for Projection TV Operations



1 TV (FUNCTION)

Activates the remote control for use with the projection TV.

2 ANT— (AUX input)

Press to change between the VHF/UHF input and the AUX input.

3 TV (POWER)

Turns the projection TV on and off. If a video input indication (e.g., VIDEO 1, VIDEO 2) appears on the screen, press TV/VIDEO or CH +/ – until a channel number appears.

4 0-9 and ENTER

Use for direct channel selection. Press 0-9 to select a channel (for example, to select channel 10, press 1 and 0). The channel will change after 2 seconds, or you can press ENTER for immediate selection.

5 CH +/–

Press to scan through the channels (+ up or – down).

6 VOL +/–

Press to adjust the volume (+ up or – down).

7 JUMP

Press to alternate or jump back and forth between two channels. The projection TV will jump between the current channel and the last channel selected.

8 MUTING

Press to mute the sound. “MUTING” will appear on the screen and will dim three seconds later. To restore the sound, press again or press VOL +.

9 FREEZE — (yellow labeled button)

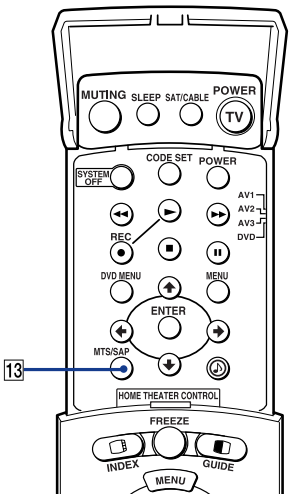
This is useful when you need to copy down information that appears on the TV’s screen (see “Using the Freeze Function” on page 44).

10 SLEEP

Press repeatedly until the projection TV displays the approximate time in minutes (15, 30, 45, 60, or 90) that you want the projection TV to remain on before shutting off automatically.

Cancel by pressing SLEEP until “SLEEP OFF” appears or turning the power off.

(Continued)



11 DISPLAY

Press to display the channel number, current time and channel label (if set).

To turn the display off, press DISPLAY again.

12 TV/VIDEO

Press repeatedly to scroll through available video inputs: TV, VIDEO 1, VIDEO 2, VIDEO 3, VIDEO 4, VIDEO 5 VIDEO 6, and VIDEO 7.

If you select Skip as a Video Label in the Setup menu, your projection TV will skip the video input you selected (see "Video Label" on page 59).

13 MTS/SAP

Press to scroll through the Multi-channel TV Sound (MTS) options (see "MTS" on page 51).

14 PIC MODE

Press PIC MODE repeatedly to directly choose one of four different video modes that best suits the program you are watching.

Vivid: Select for enhanced picture contrast and sharpness.

Standard: Select to display a standard picture for normal viewing environments.

Movie: Select to display a finely detailed picture for low light environments.

Pro (Professional): Select to display a picture with minimum enhancements.

When you select each mode, you can also adjust the picture quality (such as Brightness, Color, etc.) to suit your taste. For details, see "Mode" on page 49.

Watching the Digital TV

When you have connected the DTV receiver, you can enjoy digital TV programs. This projection TV is capable of receiving the 1080i, 720p, 480p and 480i digital TV formats.

✍ This projection TV is not capable of displaying a native 720p format signal. When a 720p format signal is received, it is converted into a 480p format signal.

To view a digital TV program

1. Connect the DTV receiver to VIDEO 5, 6 or 7 IN on the projection TV. (for details, see page 28)
2. Press TV/VIDEO to select VIDEO 5, 6 or 7.
3. Select a digital channel on the DTV receiver. For details, see the Operating Manual of the DTV receiver.
4. Adjust the volume of the projection TV as necessary.

Using Favorite Channels

The Favorite Channel feature lets you select programs from a list of favorite channels that you preset.

To display a list of your favorite channels:

✍ Your Favorite Channel options can be set automatically or manually. The factory setting for Favorite Channel is Auto.
When Favorite Channel is set to Auto, the last eight channels selected with 0-9 buttons will be set as Favorite Channel options. If you want to input your own selections as Favorite Channel settings, see "Favorite Channel" on page 53.

1 Press FAVORITES.

The Favorite Channel options appear.

2 Move the joystick up or down to highlight the channel you want to watch. The program of that channel appears in the preview window. Press ⊕ to select.

Using Twin View™

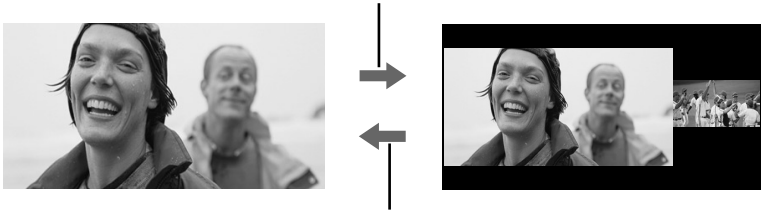
Twin View enables you to watch two programs at the same time. You can also change the size of both the left and right pictures.

Activating Twin Pictures

To display twin pictures

1 Make sure your projection TV is tuned to a working channel.

2 Press ◑.



To cancel twin pictures

❑ Press ◑ again (or press ⊕).

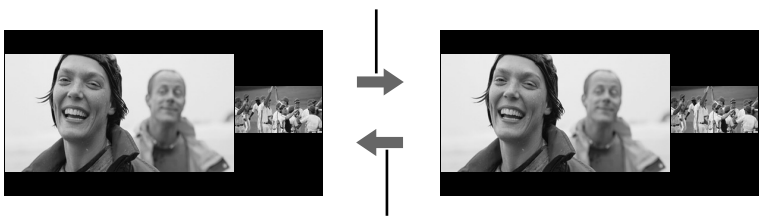
Activating the Picture

Although two pictures appear on the screen at the same time, only one picture is active. For an active picture, you can:

- ❑ Change channels.
- ❑ Adjust the volume.
- ❑ Switch the input sources from VHF/UHF to cable by pressing ANT or TV/VIDEO to switch the video input.
  When the picture on the right is activated, the input sources cannot be switched to VIDEO 5, 6, 7, or AUX by pressing ANT.
- ❑ Change the picture size by pressing the joystick up or down.

To activate the right picture

❑ Move the joystick to the right.



To activate the left picture

❑ Move the joystick to the left.

(Continued)

✍ Factors Affecting Twin View:

- If you use a cable box to view all channels, the same channel appears in both windows because the cable box unscrambles only one channel at a time.
- If you use a cable box, you can view the cable box output in one window and view a different source (such as a VCR or DVD player) in the second window by using the TV/VIDEO button.
- Sources connected to the AUX, VIDEO 5, VIDEO 6, and VIDEO 7 inputs display in the left window, but not the right.
- If you are viewing a 4:3 source and a 16:9 enhanced source (such as a DVD) side by side, the 4:3 source appears larger.
- Twin View does not display channels that are blocked by Parental settings (page 60).

✍ The active picture is highlighted in cyan.

Changing the Picture Size

The zoom feature lets you change the size of the left and right pictures.

To enlarge the left picture (reduce the right)

1. Move the joystick left to activate the left picture (if not already activated).
2. Move the joystick up to enlarge the picture and move the joystick down to reduce the picture.

To enlarge the right picture (reduce the left)

1. Move the joystick right to activate the right picture (if not already activated).
2. Move the joystick up to enlarge the picture and move the joystick down to reduce the picture.

✍ When you adjust the twin screen sizes, the projection TV memorizes the change. The next time you use the Twin View function, the memorized sizes appear.

Using the Freeze Function

The FREEZE button allows you to temporarily capture a program's picture. You can use this feature to write down information such as phone numbers, recipes, etc.

To use the Freeze function

1 When the program information you want to capture is displayed, press FREEZE.

2 The projection TV switches to Twin View mode and displays the "frozen" picture on the right, while the current program continues on the left.

3 To cancel and return to normal viewing, press FREEZE.

✍ Freeze feature is not available if you are already in Twin View™ or Index mode.

Using Scrolling Channel Index

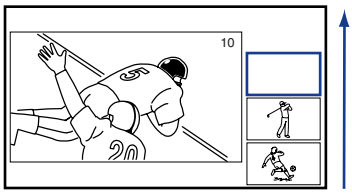
Scrolling Channel Index allows you to view and select from all receivable channels scrolling on the screen without leaving the current channel.

✍ Scrolling Channel Index will not function when parental Lock is activated.

To use the Scrolling Channel Index function

1 Press ▭.

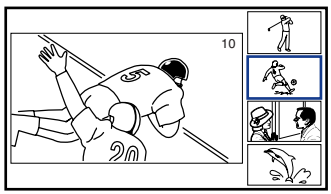
The current channel will be reduced in size and displayed on the left in normal motion picture format. The first channel is briefly displayed on the bottom-right side of the screen, then frozen. It scrolls up and the next channel appears on the bottom-right, and the process is repeated with the other channels.



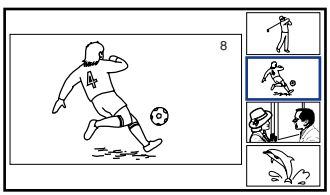
2 Move the joystick up and down so that the channel you wish to view is displayed in the cyan frame, and press ⊕.

To return to scrolling, move the joystick up and down again.

To change the direction of scrolling, move the joystick up or down once.
To increase scrolling speed, hold the joystick up or down.



3 To enlarge the selected channel into the left frame, press ⊕ again. The selected channel will be displayed in normal motion picture, and the sound also switches to this channel.



(Continued)

4 Press ▢.

The selected channel will be enlarged for normal viewing.

To cancel Scrolling Channel Index

Press ▢ again to resume normal viewing.

- ✍ Sound will only be heard from the center picture.
- ✍ If one of the pictures received through Scrolling Channel Index is snowy, the entire screen may become unstable. In this case, erase the snowy channel. (see “Channel Skip/Add” on page 54)
- ✍ If you leave the Scrolling Channel Index screen displayed for an hour without any additional operation, Scrolling Channel Index is canceled and the normal picture reappears.
- ✍ The Scrolling Channel Index cannot be used in combination with set-top boxes, DBS receivers, or cable boxes.
- ✍ Scrolling Index feature does not function if you use a cable box to view all channels.
- ✍ Sources connected to the AUX, VIDEO 5, VIDEO 6, and VIDEO 7 inputs display in the left window, but not the right windows.
- ✍ Scrolling Index does not display channels that are blocked by Parental settings (page 60).

Using Wide Screen Mode

Wide Screen Mode lets you watch 4:3 normal broadcasts in several Wide Screen modes (16:9 aspect ratio).

You can also access the Wide Mode settings in the Wide menu. For details, see page 55.

When you change channels or inputs, the Wide Mode settings revert to Wide Zoom (or the 4:3 Default setting in the Wide menu). To retain the current Wide Mode setting as channels and inputs are changed, set 4:3 Default to Off. For details, see page 55.

❑ Press WIDE MODE repeatedly to toggle through the following Wide Mode settings.

Wide Zoom

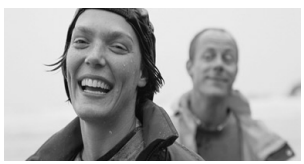
Wide Zoom enlarges the 4:3 picture, while the upper and lower parts of the picture are condensed to fit the 16:9 screen.

Normal

Normal returns the 4:3 picture to its original size.

Full

Full Mode stretches the 4:3 picture horizontally only, to fill the 16:9 screen.

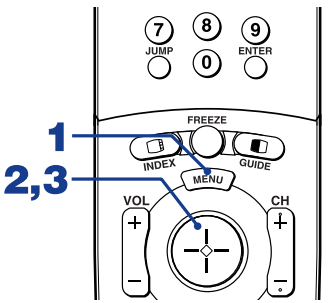


Zoom

Zoom Mode enlarges the 4:3 picture horizontally and vertically to an equal aspect ratio that fills the 16:9 screen. Useful for watching Letterbox movies.

Using the Menus

Overview



Opening and choosing a menu:

1. Press MENU to display the menu screen.
2. Move the joystick to the desired menu icon and press ⊕ to select it.
3. Use the joystick to scroll through the features.
4. See the specific menu page for instructions on moving through the menu.

The menu gives you access to the following features:

Menu Icon	Description	Page
Video	Allows you to make adjustments to your picture settings. It also allows you to customize the Picture Mode based on the type of program you are viewing.	49
Audio	Offers enhanced audio options such as listening to second audio programming (SAP), or customizing the Effect of the sound on your projection TV.	51
Channel	Allows you to set up a Favorite Channel list, run the Auto Program function, and more.	53
Wide	Allows you to set the wide screen mode, adjust the vertical center in wide mode, and set the 4:3 Default mode.	55
Timer	Lets you set the clock on your projection TV and allows you to program your projection TV for scheduled viewing using the Timers.	57
Setup	Provides several options for setting up your channels, labeling your Video inputs, and selecting the language of the on-screen menus.	58

To end a menu session:

Press MENU again.

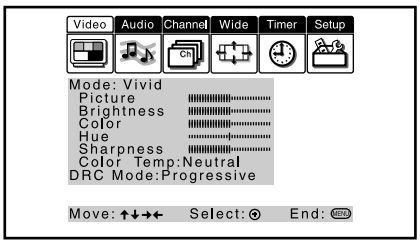
To end one menu session and move to another:

Press the joystick ← to return to the menu icons. Move the joystick ← or → to choose the next menu icon and press ⊕ to select it.

Using the Video Menu

To select the Video Menu

1. Press MENU.
2. Move the joystick to the Video icon and press .
3. Use the joystick to scroll through the features.
4. Press to select a feature. That feature's adjustment appears.
5. Use the joystick to make the desired adjustments.
6. Press to select/set.
7. Press MENU to exit the menu screen.



To restore the factory default settings for Picture, Brightness, Color, Hue, Sharpness and Color Temp

❑ Press RESET on the remote control when in the Video menu.

Selecting Video Options

To quickly and easily change from one Video Mode to another, use the PIC MODE on the remote control.

The Video menu includes the following options.

Option	Description	
Mode *Customized picture viewing*	Vivid	Select for enhanced picture contrast and sharpness.
	Standard	Recommended for Normal viewing conditions.
	Movie	Select for soft, film like, picture.
	Pro	Select for professional monitor like appearance.
	✍ You can alter the Video menu settings (Picture, Brightness, Color, etc.) for each Mode.	
Picture	Adjust to increase picture contrast and deepen the color or decrease picture contrast and soften the color.	
Brightness	Adjust to brighten or darken the picture.	
Color	Adjust to increase or decrease color intensity.	
Hue	Adjust to increase or decrease the green tones.	
Sharpness	Adjust to sharpen or soften the picture.	
Color Temp *White intensity adjustment*	Choose from three color temperatures:	
	Cool	Select to give the white colors a blue tint.
	Neutral	Select to give the white colors a neutral tint.
	Warm	Select to give the white colors a red tint (NTSC-Standard).

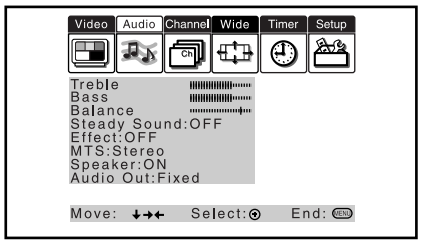
(Continued)

Option	Description	
DRC Mode *Digital Reality Creation*	Creates a high-resolution picture with 4x density, for high quality sources (i.e., DVD player, Satellite receiver).	
	Interlaced	Recommended for moving pictures.
	Progressive	Recommended for still images and text.
	CineMotion	Recommended for 24 frame-per-second films.

Using the Audio Menu

To select the Audio Menu

1. Press MENU.
2. Move the joystick to the Audio icon and press .
3. Use the joystick to scroll through the options.
4. Press to select an option. That option's settings appear.
5. Use the joystick to scroll through the settings.
6. Press to select the desired setting.
7. Press MENU to exit the menu screen.



To restore the factory default settings for Treble, Bass and Balance

❑ Press RESET on the remote control when in the Audio menu.

Selecting Audio Options

The Audio menu includes the following options:

Option	Description	
Treble	Adjust to increase or decrease higher-pitched sounds.	
Bass	Adjust to increase or decrease lower-pitched sounds.	
Balance	Adjust to emphasize left or right speaker balance.	
Steady Sound	ON	Select to stabilize the volume.
	OFF	Select to turn off Steady Sound.
Effect	TruSurround	Select for surround sound (for stereo programs only).
	Simulated	Adds a surround-like effect to mono programs.
	OFF	Normal stereo or mono reception.
MTS *Enjoy stereo, bilingual and mono programs*	Stereo	Select for stereo reception when viewing a program broadcast in stereo.
	Auto-SAP	Select to automatically switch the projection TV to second audio programs when a signal is received. (If no SAP signal is present, the projection TV remains in Stereo mode.)
	Mono	Select for mono reception. (Use to reduce noise during weak stereo broadcasts.)

(Continued)

Option	Description	
Speaker	ON	Select to turn on the projection TV speakers.
	OFF	Select to turn off the projection TV speakers and listen to the projection TV's sound only through your external audio system speakers.
Audio Out *Easy control of volume adjustments*	Variable	The projection TV's speakers are turned off, but the volume output from your audio system can still be controlled by the projection TV's remote control.
	Fixed	The projection TV's speakers are turned off and the volume, bass and treble output of the projection TV is fixed. Use your audio receiver's volume control to adjust the volume through your audio system.

Using the Channel Menu

To select the Channel Menu

1 Press MENU.

2 Move the joystick to the Channel icon and press ⊕.

3 Use the joystick to scroll through the features.

4 Press ⊕ to select a feature. That feature's options appear.

5 Use the joystick to scroll through the options.

6 Press ⊕ to select the desired option.

7 Press MENU to exit the menu screen.

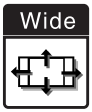
Selecting Channel Options

The Channel menu includes the following options:

Option	Description	
Favorite Channel	Auto	Select if you want Favorite Channel options to be set automatically to the last eight channels selected with the 0-9 buttons.
	Manual	Select if you want to input your own selections as Favorite Channel options. 1 Press ⊕ to select a favorite channel number. 2 Use the joystick to scroll through the channels until you find the channel you want to add to your favorites. 3 Press ⊕ to select it.
Cable	ON	Select if you are receiving cable channels with a CATV cable.
	OFF	Select if you are using an antenna.
	✍ You should run Auto Program after changing the Cable setting.	

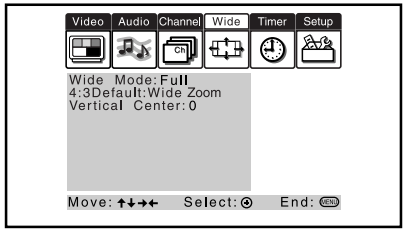
(Continued)

Option	Description	
Channel Fix *Useful when you have a cable box or satellite receiver connected*	2-6	"Fix" your projection TV's channel setting to 3 or 4 and use the cable box, VCR or satellite receiver to change channels. Select one of these settings if you have connected the device to the VHF/UHF jack.
	AUX 2-6	Same as 2-6, except you select one of these settings if you have connected the device to the AUX jack. (see page 15)
	VIDEO 1	Use when connecting a cable box to control external video sources. TV output should be connected through the cable box.
Auto Program	Automatically programs the projection TV for all receivable channels.	
Channel Skip/Add	Removes and adds viewable channels. **1** Use the joystick to scroll through the channels until you find the channel you want to skip/add. **2** Press ⊕ to select it. **3** Press the joystick up or down to toggle between "Add" and "Skip." **4** Press ⊕ to select.	
Channel Label	Label up to 20 channels with their station call letters.	



Using the Wide Menu

To select the Wide menu



1. Press MENU.
2. Use the joystick to move to the Wide icon and press ⊕.
3. Move the joystick to scroll through the features.
4. Press ⊕ to select a feature. That feature's options appear.
5. Use the joystick to scroll through the options.
6. Press ⊕ to select the desired option.
7. Press MENU to exit the menu screen.

Selecting Wide Options

To change from one Wide Mode to another, use the WIDE MODE button on the remote control.

Wide Mode is unavailable while in Twin View, Index or Freeze mode.

The 4:3 Default functions only when the projection TV receives 480i signals.

The Wide menu includes the following options:

Option	Description	
Wide Mode *Select a Wide Mode to use for 4:3 sources.*	Wide Zoom	Select to enlarge the 4:3 picture, while the upper and lower parts of the picture are condensed to fit the wide screen.
	Normal	Select to return the 4:3 picture to normal mode.
	Full	Select to enlarge the 4:3 picture horizontally only, to fill the wide screen.
	Zoom	Select to enlarge the 4:3 picture horizontally and vertically to an equal aspect ratio that fills the wide screen.
4:3 Default *Select the default Screen Mode to use for 4:3 sources.*	Wide Zoom	Select to enlarge the 4:3 picture, while the upper and lower parts of the picture are condensed to fit the wide screen.
	Normal	Select to return the 4:3 picture to normal mode.
	Full	Select to enlarge the 4:3 picture horizontally only, to fill the wide screen.
	Zoom	Select to enlarge the 4:3 picture horizontally and vertically to an equal aspect ratio that fills the wide screen.
	Off	Select to continue using the current Wide Mode setting when the channel or input is changed.

(Continued)

If 4:3 Default is set to anything but Off, the Wide Mode setting changes only for the current channel. When you change channels (or inputs), Wide Mode is automatically replaced with the 4:3 Default setting. To retain the current Wide Mode setting as channels and inputs are changed, set 4:3 Default to Off.

Option	Description
Vertical Center	Allows you to move the position of the picture up and down in the window. (Available only in Wide Zoom and Zoom modes.) Move the joystick up or down to choose a position and press .

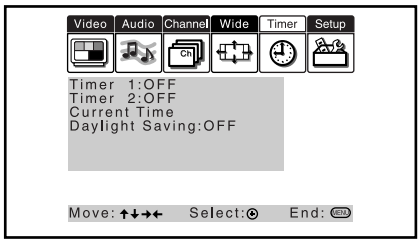
Some wide-screen programs (particularly certain theatrical releases) will be shown in aspect ratios that require the display of black bands at the top and bottom of your 16:9 screen. For more details, check the documentation that came with your DVD, or contact your content provider.

Using the Timer Menu

To select the Timer menu

1 Press MENU.

2 Move the joystick to the Timer icon and press .



To set the Current Time

1 Use the joystick to select "Current Time", then press .

2 If it is currently Daylight Saving Time, be sure to set the mode to "ON" first.

3 Use the joystick to enter the correct time, then press .

4 Press MENU to exit the menu screen.

To set the Timer

Before setting the timer, be sure to set your projection TV's clock to the current time and Daylight Saving Mode.

1 Move the joystick to "Timer 1" or "Timer 2", then press .

2 Use the joystick to enter your day, time, channel, and timer duration preferences; then, press to select each one.

3 Press MENU to exit the menu screen.

To reset the Clock or Timers

❑ Press RESET on the remote control after selecting that option in the Timer menu.

Selecting Timer Options

The Timer menu includes the following options:

Option	Description	
Timer 1 Timer 2	Program	Select to set the Timer by day, time, duration, and channel.
	OFF	Select to turn off the Timer. (Your previous settings will be saved.)
Current Time	Set the current time.	
Daylight Saving	ON	Select in the Spring to adjust the time during Daylight Saving Time.
	OFF	Select in the Fall to adjust the time at the end of Daylight Saving Time.

Using the Setup Menu

To select the Setup Menu

1. Press MENU.
2. Move the joystick to the Setup icon and press ⊕.
3. Use the joystick to scroll through the features.
4. Press ⊕ to select a feature. That feature's options appear.
5. Use the joystick to scroll through the options.
6. Press ⊕ to select the desired option.
7. Press MENU to exit the menu screen.

Selecting Setup Options

The Setup menu includes the following options:

Option	Description	
Parental Control	Allows you to set up the TV to block programs according to their content and rating levels. For details about setting, see "Using the Parent Menu" on page 60.	
Caption Vision	Allows you to select from three closed caption modes (for programs that are broadcast with closed captioning).	
	OFF	Turns off Caption Vision.
	CC1, CC2, CC3, CC4	Displays a printed version of the dialog or sound effects of a program. (Should be set to CC1 for most programs.)
	TEXT1, TEXT2, TEXT3, TEXT4	Displays network/station information presented using either half or the whole screen (if available). For closed captioning, set to CC1.
	XDS *(Extended Data Service)*	Displays a network name, program name, program length, and time of the show if the broadcaster offers this service.

Option	Description	
Video Label	Allows you to label the audio/video components you connected to the projection TV so you can identify them when using TV/VIDEO. When in the Setup menu's Video Label feature, use the joystick to highlight an input to label, then press ⊕ to select it. Use the joystick to scroll through the labels. Press ⊕ to select the component you connected to each of the input jacks on the back of your projection TV. Select "Skip" if you do not have a component connected to a particular set of input jacks.	
	VIDEO 1/2/3/4	VHS, DVD, Receiver, Satellite, Cable Box, 8 mm, DTV, Game, LD, Web, Beta, Skip
	VIDEO 5/6/7	DVD, Satellite, Cable Box, DTV, HD, Skip
	If you select "Skip", your projection TV skips this connection when you press TV/VIDEO.	
	✍ When you select "Receiver" on Video Label, your projection TV's input is fixed.	
Language	Select to display all on-screen menus in your language of choice: English, Español, Français.	

Using the Parent Menu

The Parent menu allows you to set up the TV to block programs according to their content and rating levels.

These ratings are assigned by a federal rating board. Not all programs are rated. Using the Parental Lock blocks programs with a specific rating, but it does not block an entire channel.

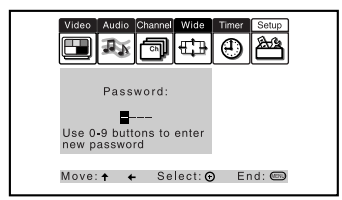
✍ Scrolling Channel Index will not function when Parental Lock is activated.

To select the rating

First, set a password, then select the country you reside in (U.S.A. or Canada) and your desired rating.

1. Press MENU.
2. Move the joystick to the Setup icon and press ⊕.

3. Make sure that “Parental Control” is selected, and press ⊕.

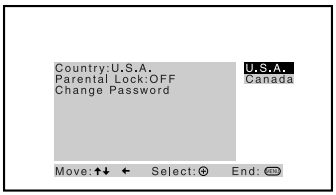


4. Use the 0-9 buttons on the remote control to enter your four-digit password.
5. Confirm your password by entering it again. Your password is stored and the Parent menu options appear.

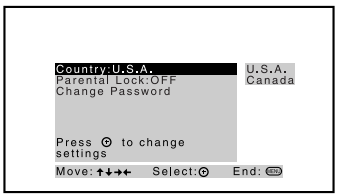
✍ You need the password entered here for any future access into the Parent menu. If you lose your password, see “Lost password” on page 74.

✍ If you want to change the password, see page 62.

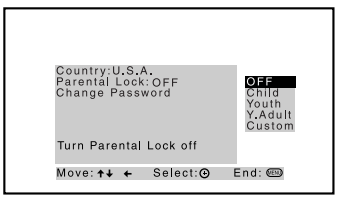
6 Make sure that “Country” is selected, and press ⊕.



7 Move the joystick up or down to select U.S.A. or Canada according to the country you reside in, and press ⊕.

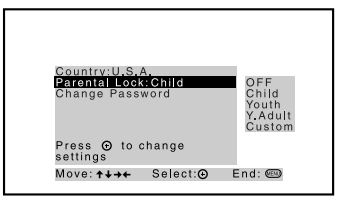


8 Move the joystick down to select “Parental Lock”, and press ⊕.



9 Move the joystick up or down to select a desired rating, and press ⊕.

If you select Child, Youth, Young Adult or Custom, the Parental Control is activated automatically.



If you want to select the ratings from Custom, see “Using Custom Rating Options” on page 63.

10 Press MENU to exit the menu screen.

If you are not familiar with the Parental Guideline rating system, you should select Child, Youth, or Young Adult to help simplify the rating selection. To set more restrictive ratings, select Custom.

For descriptions of Child, Youth, and Young Adult ratings, see pages 66 and 67.

The Parent menu includes the following options.

Option	Description	
Parental Lock *Turn ratings on/off and select a rating system*	OFF	Parental lock is off. No programs are blocked from viewing.
	Child	Maximum ratings permitted are: ❑ US: TV-Y, TV-G, G ❑ Canada: TV-Y, C, G
	Youth	Maximum ratings permitted are: ❑ US: TV-PG, PG ❑ Canada: TV-PG, PG, 8 ans+
	Young Adult	Maximum ratings permitted are: ❑ US: TV-14, PG-13 ❑ Canada: TV-14, 14+, 13 ans+
	Custom	Select to set ratings manually. ❑ US: See page 66 for details. ❑ Canada: See page 67 for details.
Change Password	For changing your password. (see below)	

To deactivate the Parental Control feature

❑ Set Parental Lock to OFF when in the Parent menu.

To change the password

1. Select Change Password option when in the Parent menu using the joystick, and press ⊕.
2. Enter a new four-digit password using the 0-9 buttons.
3. Confirm the new password by entering it again.
4. Press MENU to exit the menu screen.

Viewing Blocked Programs

You can view a blocked program by entering the password.

1. Press ENTER when tuned to a blocked program.
2. Enter your password using the 0-9 buttons.

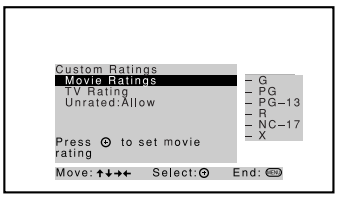
   Parental Control will be canceled temporarily until you turn your projection TV off.

Using Custom Rating Options

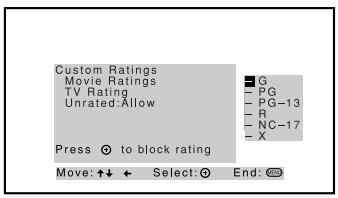
If you want to select the ratings to be blocked from Custom, follow the procedure below.

1 Perform the steps 1 to 8 in “To select the rating” on page 60 to display the Parental Lock options.

2 Move the joystick up or down to select “Custom,” and press ⊕.

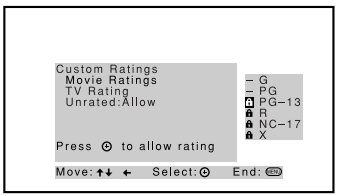


3 Make sure that “Movie Ratings” is selected, and press ⊕.



4 Move the joystick up or down to select the rating to be blocked, and press ⊕.

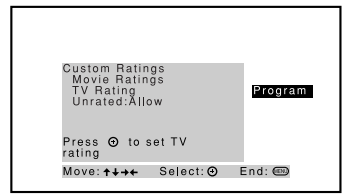
The 🔒 indicator automatically appears beside the selected rating and all “higher” ratings, indicating that the programs that match the ratings will be blocked.



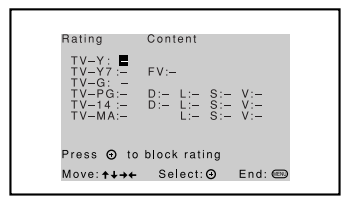
To unblock a rating, select it by moving the joystick up or down, then press ⊕. The indicator 🔒 changes into “-” and all “lower” ratings are unblocked.

(Continued)

5 Move the joystick left, then down, to select “TV Rating” or “Program,” and press ⊕.

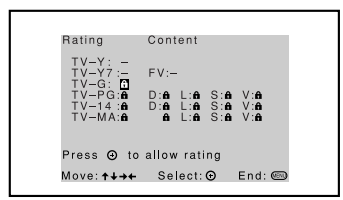


6 The “TV Rating” setting menu appears.



7 Move the joystick up or down to select the rating to be blocked, and press ⊕.

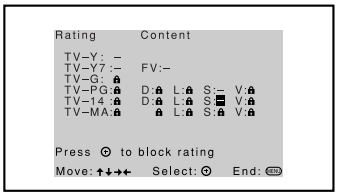
The 🔒 indicator automatically appears beside the selected rating and all “higher” ratings, indicating that the programs that match the ratings will be blocked.



To unblock a rating, select it by moving the joystick up or down, then press ⊕. The indicator 🔒 changes into “-” and all “lower” ratings are unblocked.

Some TV ratings have additional content ratings called “extenders.” The extenders are defined as follows: D (sexually suggestive Dialog), FV (Fantasy Violence), L (Coarse Language), S (Sexual situations) and V (Violence). By setting the extenders, you can define additional viewing limits. All of the extenders included in the selected ratings will be blocked. If you wish to allow any of them to be viewed, go to step 8.

8 Move the joystick left or right to select the extender to be viewed, and press ⊕.



"-" appears beside the selected extender, indicating that the programs that match the extender can be viewed.

If you press ⊕ again, 🔒 is displayed to show that the programs that match the extender will be blocked again.

9 Repeat step 8 for other extenders.

All programs that match the ratings you select and higher, except for the extenders that were canceled, will be blocked.

10 Press MENU to exit the menu screen.

US custom rating options

If you selected U.S.A. as the country of residence on page 60, the Custom Rating Menu includes the following options. (If you selected Canada, see page 67.)

Option	Description	
Movie Rating	G	All children and General Audience.
	PG	Parental Guidance suggested.
	PG-13	Parental Guidance for children under 13.
	R	Restricted viewing, parental guidance is suggested for children under 17.
	NC-17 and X	No one 17 and under allowed.
TV Rating *Block programs by their rating, content or both*	Age-Based Options	
	TV-Y	All children.
	TV-Y7	Directed to older children.
	TV-G	General Audience.
	TV-PG	Parental Guidance suggested.
	TV-14	Parents Strongly cautioned.
	TV-MA	Mature Audience only.
	Content-Based Options	
	FV	Fantasy Violence.
	D	Suggestive Dialogue.
	L	Strong Language.
	S	Sexual situations.
	V	Violence.
Unrated *Block programs or movies that are broadcast without a rating*	Block	Blocks all programs and movies that are broadcast without a rating.
	Allow	Allows programs and movies that are broadcast without a rating.

To ensure maximum blocking capability, the age-based ratings should be blocked.

If you choose to block unrated TV programs, please be aware that the following programs may be blocked: emergency broadcasts, political programs, sports, news, public service announcements, religious programs and weather.

✍ The content ratings will increase depending on the level of the age-based rating. For example, a program with a TV-PG V (Violence) rating may contain moderate violence, while a TV-14 V (Violence) rating may contain more intense violence.

Canadian custom rating options

If you selected Canada as the country of residence on page 60, the Custom Rating Menu includes the following options. (If you selected U.S.A., see page 66.)

Option	Description	
English Rating	C	All children.
	C8+	Children 8 years and older.
	G	General programming.
	PG	Parental Guidance.
	14+	Viewers 14 and older.
	18+	Adult programming.
French Rating	G	General programming.
	8 ans+	Not recommended for young children.
	13 ans+	Not recommended for ages under 13.
	16 ans+	Not recommended for ages under 16.
	18 ans+	Programming restricted to adults.
USA Rating	See “TV Rating” on page 66 for details.	

Other Information

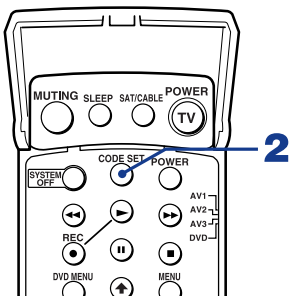
Programming the Remote Control

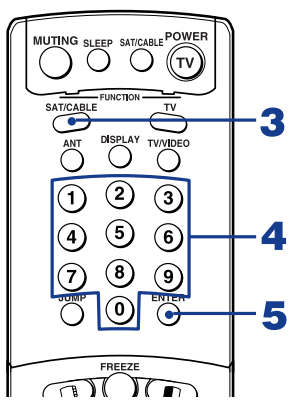
The remote control is preset to operate Sony brand video equipment.

Sony Equipment	Switch Position on Remote Control	Programmable Code Number
Beta, ED Beta VCRs	AV1	303
8 mm VCR	AV2	302
VHS VCR	AV3	301
DVD Player	DVD	751

If you have video equipment other than Sony brand that you want to control with the projection TV's remote control, use the following procedures to program the remote control.

✍ The equipment must have infrared (IR) remote capability in order to be used with the remote control.

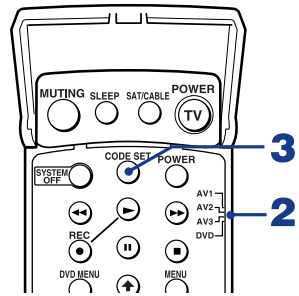


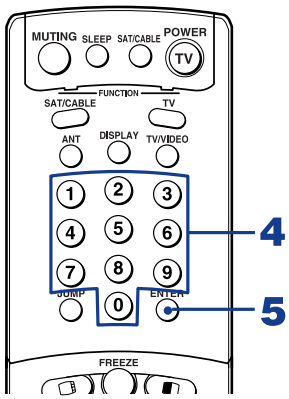


From the "Manufacturer's Codes" listed on page 70, select the three-digit code number for the manufacturer's code for your component. If more than one code number is listed, start with the number listed first. Use the code number to complete the following procedure.

To program a cable box or a satellite receiver

1. Open the panel of the remote control.
2. Press CODE SET inside the panel.
3. Close the panel and press SAT/CABLE (FUNCTON).
4. Enter the three-digit manufacturer's code number using the 0-9 buttons.
5. Press ENTER.
6. To check if the code number works, aim the projection TV's remote control at the component and press the green POWER button that corresponds with that component. If it responds, the programming is completed. If not, try using the other codes listed for that manufacturer.





To program video equipment

1. Open the panel of the remote control.
2. Move the slide switch to the desired component type.
3. Press CODE SET inside the panel.

   ✍ You must perform step 4 within 10 seconds of step 3, or you must start again from step 3.

4. Close the panel and enter the three-digit manufacturer's code number using the 0-9 buttons.
5. Press ENTER.
6. To check if the code number works, aim the projection TV's remote control at the component, open the panel, and press the green POWER button. If it responds, the programming is completed. If not, try using the other codes listed for that manufacturer.

Tips

- If more than one code number is listed, try entering them one by one until you come to the correct code for your component.
- If you enter a new code number, the code number you previously entered at that setting is erased.
- In some rare cases, you may not be able to operate your component with the Sony remote control. In this case, use the component's own remote control unit.

Manufacturer's Codes

VCRs

Manufacturer	Code
Sony	301
Admiral (M. Ward)	327
Aiwa	338, 344
Audio Dynamic	314, 337
Broksonic	319, 317
Canon	309, 308
Citizen	332
Craig	302, 332
Criterion	315
Curtis Mathes	304, 338, 309
Daewoo	341, 312, 309
DBX	314, 336, 337
Dimensia	304
Emerson	319, 320, 316, 317, 318, 341
Fisher	330, 335
Funai	338
General Electric	329, 304, 309
Go Video	322, 339, 340
Goldstar	332
Hitachi	306, 304, 305, 338
Instant Replay	309, 308
JC Penney	309, 305, 304, 330, 314, 336, 337
JVC	314, 336, 337, 345, 346, 347
Kenwood	314, 336, 332, 337
LXI (Sears)	332, 305, 330, 335, 338
Magnavox	308, 309, 310
Marantz	314, 336, 337
Marta	332
Memorex	309, 335
Minolta	305, 304
Mitsubishi/ MGA	323, 324, 325, 326
Multitech	325, 338, 321
NEC	314, 336, 337
Olympic	309, 308
Optimus	327
Panasonic	308, 309, 306, 307
Pentax	305, 304
Philco	308, 309
Philips	308, 309, 310
Pioneer	308
Quasar	308, 309, 306
RCA/ PROSCAN	304, 305, 308, 309, 311, 312, 313, 310, 329
Realistic	309, 330, 328, 335, 324, 338
Sansui	314
Samsung	322, 313, 321
Sanyo	330, 335
Scott	312, 313, 321, 335, 323, 324, 325, 326
Sharp	327, 328
Shintom	315
Signature 2000 (M. Ward)	338, 327
SV2000	338
Sylvania	308, 309, 338, 310
Symphonic	338
Tashiro	332
Tatung	314, 336, 337
Teac	314, 336, 338, 337
Technics	309, 308
Toshiba	312, 311
Wards	327, 328, 335, 331, 332
Yamaha	314, 330, 336, 337
Zenith	331

DVD Players

Manufacturer	Code
Sony	751
Panasonic	753
Pioneer	752
RCA	755
Toshiba	754

Cable Boxes

Manufacturer	Code
Hamlin/Regal	222, 223, 224, 225, 226
Jerrold/G. I.	201, 202, 203, 204, 205, 206, 207, 208, 218
Oak	227, 228, 229
Panasonic	219, 220, 221
Pioneer	214, 215
Scientific Atlanta	209, 210, 211
Tocom	216, 217
Zenith	212, 213

Satellite Receivers

Manufacturer	Code
Sony	801
General Electric	802
Hitachi	805
Hughes	804
Panasonic	803
RCA/ PROSCAN	802, 808
Toshiba	806, 807

Operating Other Components with Your Projection TV Remote Control

Operating a VCR

Open the panel and move the slide switch to the AV input you coded for this device.

To Do This ...	Press
Turn on/off	green POWER button (inside the panel)
Change channels	CH +/–
Record	► and REC simultaneously
Play	►
Stop	■
Fast forward	►►
Rewind the tape	◄◄
Pause	❚❚ (press again to resume normal playback)
Search the picture forward or backward	►► or ◄◄ during playback (release to resume normal playback)
Change input mode	Slide switch

Operating a DVD Player

Open the panel and move the slide switch to the DVD input you coded for this device.

To Do This ...	Press
Turn on/off	green POWER button (inside the panel)
Play	►
Stop	■
Pause	❚❚ (press again to resume normal playback)
Step through different tracks of an audio disc	►► to step forward or ◄◄ to step backward
Step through different chapters of a video disc	CH+ to step forward or CH– to step backward
Display the DVD menu	DVD MENU
Display the menu (Setup)	MENU
Operate the DVD menu	↑, ↓, ←, →, ENTER

(Continued)

Operating a Cable Box

To Do This ...	Press
Turn on/off	SAT/CABLE (POWER)
Select Cable Box	SAT/CABLE (FUNCTION)
Select a channel	0-9 buttons, ENTER
Change channels	CH +/–
Back to previous channel	JUMP

Operating a Satellite Receiver

To Do This ...	Press
Turn on/off	SAT/CABLE (POWER)
Select Satellite Receiver	SAT/CABLE (FUNCTION)
Select a channel	0-9 buttons, ENTER
Change channels	CH +/–
Back to previous channel	JUMP
Display channel number	DISPLAY
Display DBS guide	GUIDE
Display DBS menu	MENU
Move highlight (cursor)	Joystick or arrows
Select item	

Troubleshooting

If, after reading these operating instructions, you have additional questions related to the use of your Sony television, please call our Customer Information Services Center at 1-800-222-SONY (7669) (U.S. residents only) or (416) 499-SONY (7669) (Canadian residents only).

Problem	Possible Remedies
No picture (screen not lit), no sound	❑ Make sure the projection TV's power cord is connected securely to the wall outlet. ❑ Push the power button on the front of the projection TV. ❑ Check to see if the TV/VIDEO setting is correct: when watching TV, set to TV, and when watching connected equipment, set to VIDEO 1, 2, 3, 4, 5, 6 or 7. ❑ Try another channel. It could be station trouble. ❑ The Parental Control feature is activated (see "Using the Parent Menu" on page 60). ❑ If your projection TV does not turn on, and a red light keeps flashing, your projection TV may need service. Call your local Sony Service Center.
Remote control does not operate	❑ Batteries could be weak. Replace the batteries. ❑ Press TV (FUNCTION) when operating your projection TV. ❑ Make sure the projection TV's power cord is connected securely to the wall outlet. ❑ Locate the projection TV at least 3-4 feet away from fluorescent lights. ❑ Check the orientation of the batteries.
Dark, poor or no picture (screen lit), good sound	❑ Adjust the Picture setting in the Video menu (see page 49). ❑ Adjust the Brightness setting in the Video menu (see page 49). ❑ Check antenna/cable connections. ❑ Adjust the convergence again using FLASH FOCUS (see "Adjusting the Convergence Automatically – FLASH FOCUS™ –" on page 33).
Good picture, no sound	❑ Press MUTING so that "MUTING" disappears from the screen (see page 34). ❑ Make sure Speaker is set to ON in the Audio menu (see page 52). ❑ Check the MTS setting in the Audio menu (see "MTS" on page 51).
Cannot receive digital channels (when a DTV receiver is connected)	❑ Check the connections between the DTV receiver and the projection TV (see page 28). ❑ Check your local listings to find out if you can receive digital broadcasts in your area.
Cannot receive upper channels (UHF) when using an antenna	❑ Change Cable to OFF (see page 53). ❑ Use Auto Program in the Channel menu to add receivable channels that are not presently in TV memory (see page 54).
No color	❑ Adjust the Color settings in the Video menu (see page 49).
Only snow and noise appear on the screen	❑ Check the Cable setting in the Channel menu (see "Cable" on page 53). ❑ Check the antenna/cable connections. ❑ Make sure the channel is broadcasting programs. ❑ Press ANT to change the input mode (see page 37).
Dotted lines or stripes	❑ Adjust the antenna. ❑ Move the projection TV away from noise sources such as cars, neon signs, or hair-dryers.

(Continued)

Problem	Possible Remedies
Projection TV is fixed to one channel	❑ Use Auto Program in the Channel menu to add receivable channels that are not presently in TV memory (see page 54). ❑ Check your Channel Fix settings (see page 54).
Double images or ghosts	❑ Use a highly directional outdoor antenna or a cable (when the problem is caused by reflections from nearby mountains or tall buildings).
Cannot operate menu	❑ If the item you want to choose appears in gray, you cannot select it. ❑ Turn the projection TV's power off and on again.
Cannot receive any channels when using cable TV	❑ Use Auto Program in the Channel menu to add receivable channels that are not presently in TV memory (see page 54). ❑ Check your cable settings. ❑ Make sure Cable is set to ON in the Channel menu (see page 53).
Cannot gain enough volume when using a cable box	❑ Increase the volume of the cable box using the cable box's remote control. Then press TV (FUNCTION) and adjust the projection TV's volume.
Channel Index does not display all available channels	❑ Make sure Cable is set to ON in the Channel menu (see "Cable" on page 53). ❑ Use Auto Program in the Channel menu to add receivable TV channels that are not presently in TV memory (see page 54).
Cannot receive channels Unable to select a channel	❑ Use Auto Program in the Channel menu to add receivable TV channels that are not presently in TV memory (see page 54).
Lost password	❑ In the password screen (see page 60), enter the following master password: 4357. The master password clears your previous password; it cannot be used to temporarily unblock channels.
Cannot change channels with the remote control	❑ Be sure you have not inadvertently switched your projection TV from channel 3 or 4 setting if you are using another device to change channels. ❑ If you are using another device to control channels, be sure the "function" button for that device has been pressed, or the slide switch is set correctly. For example, if you are using your cable to control channels, be sure to press SAT/CABLE.
Cannot cycle through the other video equipment connected to the projection TV	❑ Be sure the Video Label feature has not been set to Skip (see page 59).
There is a black box on the screen	❑ You have selected a text option in the Setup menu and no text is available. (see page 58 to reset Setup selections) To turn this feature off, select OFF in the Caption Vision option. If you were trying to get closed captioning, select CC1 instead of Text 1-4.
There is no twin picture or it is just static	❑ Be sure your twin picture is set to a video source/channel that has a program airing. ❑ You may be tuned to a video input with nothing connected to it. Try cycling through your video inputs using TV/VIDEO. ❑ Twin View is not set to receive a signal from the AUX input. If you have connected a VCR, DVD player or satellite receiver to the AUX input on the projection TV, it will not show in the second picture.

Problem	Possible Remedies
You get the same program in the window picture as in the main picture	❑ Both may be set to the same channel. Try changing channels in either the main picture or the window picture. ❑ You may be running all your channels through a cable box. The cable box will only unscramble one signal at a time, so you cannot use the Twin View feature. If possible, run a direct cable to your projection TV's VHF/UHF input (this will only work if your cable system provides an unscrambled signal.)
You cannot get anything but TV channels in your second picture	❑ Be sure the video label has not been set to skip your video inputs. See the Setup menu on page 59.
Favorite Channel does not display your choices	❑ Verify that Favorite Channel is set to Manual in the Channel menu (see "Favorite Channel" on page 53).
Some video sources do not appear when you press TV/ VIDEO	❑ Ensure that Video Label is not set to SKIP (see "Video Label" on page 59).

Specifications

Projection System	3 picture tubes, 3 lenses, horizontal in-line system	
Picture Tube	7-inch high-brightness monochrome tubes (6.3 raster size), with optical coupling and liquid cooling system	
Projection Lenses	High performance, large diameter hybrid lens F1.1	
Antenna	75 ohm external terminal for VHF/UHF	
Television System	NTSC, American TV Standard	
Screen Size (measured diagonally)	51 inches (KP-51WS500) 57 inches (KP-57WS500) 65 inches (KP-65WS500)	
Channel Coverage		
VHF	2-13	
UHF	14-69	
CATV	1-125	
Power Requirements	120V, 60 Hz	
Number of Inputs / Outputs		
DVI-HDTV		1 terminal, 3.3V T.M.D.S., 50 ohms The DVI input terminal is compliant with the EIA-861 standard and is not intended for use with personal computers.
Video (IN)	4	1 Vp-p, 75 ohms unbalanced, sync negative
S Video (IN)	3	Y: 1 Vp-p, 75 ohms unbalanced, sync negative C: 0.286 Vp-p (Burst signal), 75 ohms
Audio (IN)	6	500 mVrms (100% modulation) Impedance: 47 kiloohms
AUDIO (VAR/FIX)	1	500 mVrms at the maximum volume setting (Variable) 500 mVrms (Fixed) Impedance (output): 1 kiloohm
TV Out	1	Video: 1 Vp-p 75 ohms unbalanced, Sync negative Audio: 500 mVrms (100% modulation) Impedance (output): 1 kiloohm
CONTROL S (IN/OUT)	1	minijacks
Component Video Input	2 (Y, P_B, P_R)	Y: 1.0 Vp-p, 75 ohms unbalanced, sync negative P_B: 0.7 Vp-p, 75 ohms P_R: 0.7 Vp-p, 75 ohms
RF Inputs	2	
Converter	1	
Speaker Output	20 W × 2	
Dimensions (W × H × D)	47 1/8 × 51 5/8 × 24 7/8 inches (1,194 × 1,310 × 630 mm) (KP-51WS500) 52 1/4 × 54 1/4 × 27 1/4 inches (1,326 × 1,377 × 690 mm) (KP-57WS500) 61 × 57 × 29 inches (1,542 × 1,452 × 735 mm) (KP-65WS500)	

Mass	167 lb 9oz (76 kg) (KP-51WS500) 196 lb 3oz (89 kg) (KP-57WS500) 275 lb 8 oz (125 kg) (KP-65WS500)
Power Consumption	
In Use	230 W
In Standby	Under 1 W
Supplied Accessories	
Remote Control	RM-Y909
AA (R6) Batteries	2 supplied for remote control
Optional Accessories	
AV Cable	VMC-810/820/830 HG
Audio Cable	RKC-515HG
Control S Cable	RK-G69HG
Component Video Cable	VMC-10/30 HG
AV Receiver	STR-V555ES or equivalent

Design and specifications are subject to change without notice.

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http://www.world.sony.com/

Sony Corporation

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SONY

4-088-847-21

Télévision à projection à grand écran

Mode d'emploi

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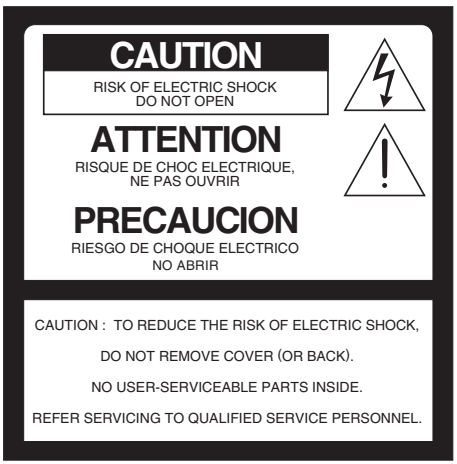
KP-51WS500 KP-57WS500 KP-65WS500

AVERTISSEMENT

Afin d'éviter tout risque d'incendie ou d'électrocution, ne pas exposer cet appareil à la pluie ou à l'humidité.



Ce sigle vise à signaler à l'utilisateur la présence d'une "tension dangereuse" non isolée au sein de l'appareil, dont la puissance peut être suffisante pour provoquer un risque d'électrocution.

Ce sigle vise à signaler à l'utilisateur la présence d'une documentation importante concernant les instructions de fonctionnement et d'entretien de cet appareil.

ATTENTION

Pour prévenir les chocs électriques, ne pas utiliser cette fiche polarisée avec un prolongateur, une prise de courant ou une autre sortie de courant, sauf si les lames peuvent être inserées à fond sans en laisser aucune partie à decouvert.

ATTENTION

Lorsque vous utilisez des jeux vidéo, des ordinateurs et autres produits similaires avec votre téléviseur de projection, ou que vous visualisez une station de télévision dont le logo reste en permanence à l'écran, maintenez les réglages de luminosité et de contraste sur de faibles valeurs. Si une image fixe (non animée), comme le logo d'une station de télévision, reste affichée à l'écran pendant de longues périodes alors que la luminosité et le contraste sont réglés sur des valeurs élevées, l'image peut rester définitivement incrustée sur l'écran. Ces impressions ne sont pas couvertes par votre garantie.

Remarque sur l'affichage des sous-titres d'image

Ce téléviseur permet d'afficher les sous-titres d'image conformément au chapitre §15.119 des règlements FCC.

Remarque aux installateurs du système CATV

L'attention des installateurs du système CATV est attirée sur l'article 820-40 du NEC qui énonce les directives concernant le raccordement à la masse, stipulant en particulier qu'il doit être branché à celui de l'immeuble (ou maison), et aussi proche que possible du point d'entrée du câble.

L'utilisation de ce téléviseur à d'autres fins qu'une vue par des particuliers des émissions transmises par les canaux UHF, VHF, par des sociétés de câble ou satellite pour le grand public peut nécessiter l'accord de ces sociétés ou du propriétaire de l'émission.

AVERTISSEMENT

Comment réduire le risque de "rémanence" sur votre téléviseur de projection ?

Des images lumineuses fixes, comme les logos des chaînes de télévision, affichées sur votre téléviseur, peuvent causer une détérioration permanente de celui-ci, entraînant une rémanence à l'écran.

Veuillez prendre les mesures suivantes afin de réduire le risque de rémanence :

Visualisez différentes sources de programmes ou supports de programmation.

Une rémanence peut se produire lorsque des images fixes lumineuses telles que des logos de chaînes de télévision sont visualisées. Lorsque vous changez le support de programme visualisé, vous réduisez le risque qu'une image isolée s'imprime sur les tubes image de votre téléviseur.

Lorsque vous visualisez des programmes comportant des images fixes, réglez le paramétrage de l'écran de manière à réduire les niveaux "Image" et "Luminosité". La rémanence est accélérée avec des paramètres "Luminosité" et "Image" élevés.

Veuillez vous référer à votre mode d'emploi concernant le réglage des paramètres de l'écran.

Ceci vous aidera à réduire le risque de rémanence.

LA RÉMANENCE N'EST PAS COUVERTE PAR NOTRE GARANTIE.

Securite

- ❑ N'utilisez le téléviseur de projection que sur un courant alternatif de 120 V.
- ❑ Pour des raisons de sécurité, la prise est conçue pour ne pouvoir être branchée dans le mur que d'une seule façon. Si vous n'arrivez pas à complètement brancher la prise, veuillez contacter votre détaillant.
- ❑ Si un corps liquide ou solide pénètre dans le châssis, débranchez immédiatement le téléviseur de projection et faites-le contrôler par du personnel de service qualifié avant de le réutiliser.
- ❑ Si vous ne devez pas utiliser le téléviseur de projection pendant plusieurs jours, déconnectez l'alimentation électrique en débranchant la prise. Ne tirez jamais sur le câble.

  Pour plus d'informations sur les mesures de sécurité, *voir "CONSIGNES DE SÉCURITÉ IMPORTANTES" à la page 4*.

Installation

- ❑ Pour éviter un échauffement interne, ne bloquez pas les ouvertures de ventilation.
- ❑ N'installez pas le téléviseur de projection dans un lieu chaud ou humide, ou soumis à une grande quantité de poussière ou à des vibrations mécaniques.
- ❑ Évitez de faire fonctionner le téléviseur de projection à une température inférieure à 5°C (41°F).
- ❑ Si le téléviseur de projection est transporté directement d'un lieu froid à un lieu chaud, ou si la température de la pièce change soudainement, l'image peut être floue ou les couleurs de mauvaise qualité à cause de la condensation d'humidité. Dans ce cas, patientez quelques heures pour permettre à l'humidité de s'évaporer avant d'allumer le téléviseur de projection.
- ❑ Pour obtenir une image optimale, n'exposez pas l'écran à un éclairage direct ou aux rayons du soleil. Il est recommandé d'utiliser une lampe suspendue et dirigée vers le bas ou de recouvrir les fenêtres qui font face à l'écran avec des rideaux opaques. Il est également recommandé d'installer le téléviseur de projection dans une pièce dans laquelle le sol et les murs ne sont pas recouverts d'une matière réfléchissante.

Partenaire ENERGY STAR®, Sony Corporation déclare que ce produit satisfait aux critères de rendement énergétique ENERGY STAR®.

Informations sur les marques de commerce

TruSurround et le symbole (●)® sont des marques de commerce de SRS Labs, Inc. La technologie TruSurround est utilisée sous licence de SRS Labs, Inc.

BBE et le symbole BBE sont des marques de commerce de BBE Sound, Inc. et sont utilisés sous licence de BBE Sound, Inc. en regard des brevets américains numéros 4,638,258 et 4,482,866.

Référence du propriétaire

Les numéros de série et de modèle sont indiqués sur l'autocollant apposé à l'arrière du téléviseur à projection, sous le logo Sony, ainsi que sur l'emballage du téléviseur (étiquette blanche). Reportez ces numéros dans les espaces ci-dessous. Mentionnez-les à votre détaillant Sony chaque fois que vous communiquez avec lui au sujet de ce produit.

Modèle n°_____

Numéro de série_____

CONSIGNES DE SÉCURITÉ IMPORTANTES

Pour votre protection, veuillez lire entièrement ces instructions et les conserver à toutes fins utiles.

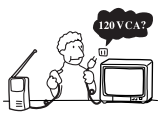
Observez et respectez scrupuleusement tous les avertissements, précautions et instructions spécifiés sur l'appareil, ou décrits dans le mode d'emploi ou le manuel d'entretien.

AVERTISSEMENT

Pour éviter tout risque de blessure, veuillez respecter les précautions de sécurité élémentaires suivantes lors de l'installation, l'utilisation et la réparation de l'appareil.

Utilisation

Sources d'alimentation

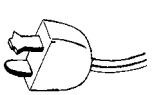


Ce poste ne doit être alimenté que sur le type de source d'alimentation indiqué sur la plaque du numéro de série/modèle.
Si vous n'êtes pas sûr du type d'alimentation électrique de votre domicile, consultez votre revendeur ou la société locale de distribution électrique. En ce qui concerne les postes conçus pour fonctionner sur le courant continu, reportez-vous au mode d'emploi.

Mise à la terre ou polarisation

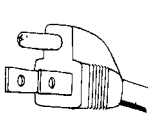
Ce poste est équipé d'une fiche d'alimentation secteur polarisée (une lame de la fiche est plus large que l'autre) ou d'une fiche à trois broches avec fil de terre (la troisième broche sert pour la mise à la terre).
Suivez les instructions ci-dessous :

Pour un poste équipé d'une fiche d'alimentation secteur polarisée



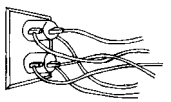
Cette fiche ne se branche sur la prise secteur que d'une seule manière. C'est un dispositif de sécurité. Si vous ne parvenez pas à enfoncer la fiche à fond dans la prise, essayez de la retourner. Si la fiche ne correspond toujours pas, contactez votre électricien pour faire poser une prise adéquate. N'annulez pas le dispositif de sécurité de la fiche polarisée en forçant son insertion.

Pour un poste équipé d'une fiche secteur à trois broches



Cette fiche ne peut être insérée que dans une prise secteur avec mise à la terre. C'est un dispositif de sécurité. Si vous ne parvenez pas à insérer la fiche dans la prise, contactez votre électricien pour faire poser une prise adéquate. N'annulez pas le dispositif de sécurité de la fiche de terre.

Surcharge



Ne surchargez pas les prises murales, les rallonges ou autres prises de courant au-delà de leur capacité, car il y a risque d'incendie ou d'électrocution.

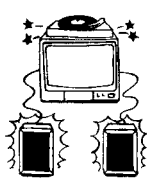
Mettez toujours le poste hors tension lorsqu'il n'est pas utilisé. Si vous n'avez pas l'intention de l'utiliser pendant longtemps, débranchez-le de la prise murale par précaution, pour éviter la possibilité qu'une anomalie interne crée un début d'incendie.

Si le poste produit continuellement ou fréquemment des bruits de claquement ou des bruits secs pendant son fonctionnement, débranchez-le et consultez votre revendeur ou un réparateur. Certains téléviseurs font entendre occasionnellement des bruits de claquement ou des bruits secs, en particulier au moment de la mise sous ou hors tension, mais ceci est normal.

Pénétration d'un corps solide ou liquide

N'introduisez jamais d'objet quel qu'il soit dans le poste par les fentes d'aération car il pourrait toucher des points de haute tension ou court-circuiter des pièces et provoquer ainsi un incendie ou une électrocution. Ne renversez jamais de liquide quel qu'il soit dans le poste.

Raccordements



N'utilisez pas de cordons qui ne sont pas recommandés par le fabricant, car ils pourraient être dangereux.

Nettoyage

Nettoyez le châssis du téléviseur de projection avec un tissu doux et sec. Pour retirer la poussière de l'écran, essuyez-le avec un tissu doux. Les taches tenaces peuvent être retirées avec un tissu imprégné d'une solution de savon doux et d'eau tiède. N'utilisez jamais de solvants puissants tels que des diluants ou de la benzine.

Si l'image s'obscurcit après une utilisation du téléviseur de projection sur une longue période de temps, il peut être nécessaire de nettoyer l'intérieur de l'appareil. Consultez du personnel de service qualifié.

Installation

Attention à l'eau et à l'humidité

N'utilisez pas un poste alimenté sur le secteur près d'un récipient d'eau, comme une baignoire, un lavabo, un évier ou une lessiveuse, dans un sous-sol humide ou près d'une piscine, etc.

Accessoires

Ne placez pas l'appareil sur un chariot, un socle, une table ou une étagère instable. L'appareil pourrait tomber et blesser gravement un enfant ou un adulte, et l'appareil lui-même pourrait être sérieusement endommagé. Utilisez uniquement un chariot ou un socle recommandé par Sony pour ce modèle particulier de téléviseur. Aucune partie du téléviseur ne doit dépasser du bord du chariot ou du socle pour téléviseur. Toute partie qui dépasse constitue un danger potentiel. L'appareil posé sur son chariot doit être déplacé avec précaution. Des arrêts brusques, l'application d'une force trop importante ou une surface irrégulière peuvent entraîner la chute de l'appareil et du chariot.

Ventilation

Les fentes et les ouvertures aménagées sur le coffret et au dos ou au bas du poste sont prévues pour la ventilation nécessaire. Pour assurer un fonctionnement fiable et pour protéger le poste d'une surchauffe, ces fentes et ouvertures ne doivent jamais être bloquées ou recouvertes.

- Ne couvrez jamais les fentes et les ouvertures avec un chiffon ou autre morceau de tissu.

- Ne bloquez jamais les fentes et ouvertures en plaçant le poste sur un lit, un canapé, un tapis ou autre surface similaire.

- N'encastrez jamais le poste dans un endroit fermé, comme une bibliothèque ou un meuble, sauf si une ventilation adéquate est assurée.

- Ne posez pas le poste sur ou près d'un radiateur ou d'un système de chauffage, ou dans un endroit exposé au soleil.

Protection du cordon d'alimentation

Ne laissez jamais un objet rouler sur le cordon d'alimentation ou ne posez jamais un objet lourd dessus. N'installez pas le poste dans un endroit où le cordon d'alimentation pourrait s'user prématurément ou être endommagé.

Antennes

Mise à la terre de l'antenne extérieure

Si vous installez une antenne extérieure, veuillez respecter les précautions ci-dessous. Une antenne extérieure ne doit pas être installée près de lignes électriques aériennes ou autres circuits d'alimentation ou d'éclairage électriques, ou dans un endroit où elle pourrait toucher de tels circuits ou lignes.

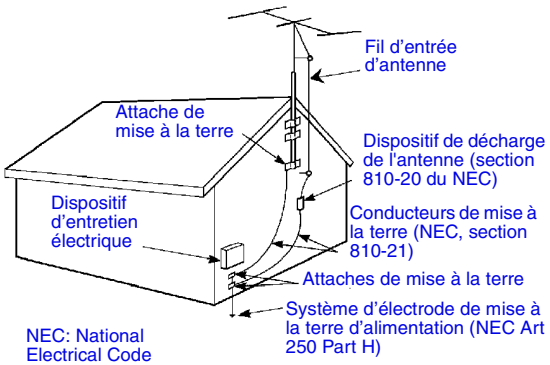
LORS DE L'INSTALLATION D'UNE ANTENNE EXTÉRIEURE, SOYEZ EXTRÊMEMENT PRUDENT POUR ÉVITER DE TOUCHER DE TELS CIRCUITS OU LIGNES ÉLECTRIQUES, CAR UN TEL CONTACT ENTRAÎNE PRATIQUEMENT TOUJOURS LA MORT.

L'antenne doit être reliée à la terre par mesure de sécurité contre les hausses brusques de tension et l'électricité statique accumulée.

La section 810 du National Electrical Code (NEC) aux États-Unis et la section 54 du Code électrique du Canada fournissent des informations sur le raccordement à la terre correct du mât et de la structure porteuse, le raccordement de la descente d'antenne à une unité de déchargement d'antenne, la taille des conducteurs de mise à la terre, l'emplacement de l'unité de décharge d'antenne, la connexion aux électrodes de terre, et les spécifications des électrodes de terre.

Mise à la terre de l'antenne selon le National Electrical Code des États-Unis (NEC), ANSI/NFPA70

Reportez-vous à la section 54-300 du Code électrique du Canada en ce qui concerne la mise à la terre de l'antenne.



Foudre

Pour une protection supplémentaire de ce poste de télévision durant les orages accompagnés de foudre, ou lorsque le poste doit rester sans surveillance et sans usage pour des périodes prolongées, débranchez-le de sa prise murale et déconnectez l'antenne. Ceci évitera l'endommagement du poste causé par la foudre et les surtensions.

Dépannage

Dommages nécessitant un dépannage

Débranchez le poste de la prise murale et faites-le réparer par un réparateur qualifié dans les cas suivants :

- Le cordon ou la fiche d'alimentation est abîmé ou dénudé.

- Un liquide s'est renversé dans le poste.
- Le poste a été mouillé ou exposé à la pluie.
- Le poste est tombé et a été cogné violemment, ou bien le coffret est abîmé.

- Le poste ne fonctionne pas normalement alors que vous avez respecté toutes les instructions du mode d'emploi. N'agissez que sur les commandes spécifiées dans le mode d'emploi. Tout réglage incorrect d'une autre commande risque d'endommager le poste et de nécessiter un important travail par un technicien qualifié pour réparer le poste.

- Une baisse sensible des performances indique que le poste a besoin d'être réparé.

Réparation

N'essayez pas de réparer le poste vous-même; vous risquez d'être exposé à des hautes tensions dangereuses ou autres risques en ouvrant le coffret. Pour toute réparation, adressez-vous à un réparateur qualifié.

Remplacement des pièces

Si des pièces doivent être remplacées, n'oubliez pas de demander au réparateur d'attester par écrit qu'il a utilisé des pièces de rechange spécifiées par le fabricant, avec les mêmes caractéristiques que les pièces originales. Toute substitution non autorisée peut être la cause d'un incendie, d'une électrocution ou autre danger.

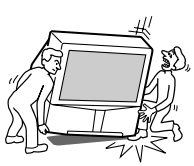
Révision de sécurité

À l'occasion de tout dépannage ou réparation du poste, demandez au réparateur d'effectuer une révision de sécurité de routine (comme spécifié par le fabricant) pour déterminer si le poste offre une bonne sécurité de fonctionnement, et faites-le certifier par écrit.

Lorsque le poste atteint la fin de sa vie utile, ne le jetez pas n'importe comment car il y a risque d'implosion du tube image. Demandez à un réparateur qualifié de vous en débarrasser.

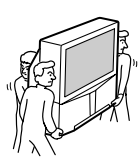
Mesures de sécurite

Veillez à ne pas faire tomber le téléviseur sur vos pieds lorsque vous le manipulez



Lorsque vous mettez le téléviseur en place, il risque de vous échapper et de tomber sur vos pieds. Faites particulièrement attention à l'endroit où vous placez vos pieds lorsque vous manipulez le téléviseur.

Déplacez le téléviseur en respectant les règles suivantes



Si vous transportez le téléviseur sans tenir compte des règles suivantes et sans un nombre de personnes suffisant, il risque de tomber et de provoquer des blessures graves. Vous devez impérativement respecter les instructions indiquées ci-dessous.

- Transportez le téléviseur avec le nombre de personnes indiqué. (voir page 11)
- Ne transportez pas le téléviseur en le tenant par la grille de protection du haut-parleur.
- Tenez le téléviseur fermement lorsque vous le transportez.
- Le modèle KP-65WS500 est équipé de poignées pour le transport.

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Présentation du téléviseur de projection de Sony

Présentation du téléviseur de projection de Sony

Nous vous remercions d'avoir acheté le téléviseur de projection de Sony. Ce manuel couvre les modèles KP-51WS500, KP-57WS500 et KP-65WS500.
Le modèle KP-51WS500 sera utilisé pour les illustrations.

Caractéristiques

Votre téléviseur de projection offre, entre autres, les caractéristiques suivantes :

- **Hi Scan 1080™** : permet de recevoir les formats de télévision numérique 1080i, 720p, 480p et 480i. En utilisant les prises VIDEO 5/6/7 IN, vous pouvez raccorder un récepteur DTV (télévision numérique) pour visualiser des programmes DTV.
- **DRC™ Multi-Function** : contrairement aux doubleurs de lignes conventionnels, le DRC double les lignes verticales et les lignes horizontales. Il offre donc une densité quatre fois plus élevée pour les images provenant de sources de qualité tels que le lecteur DVD, le récepteur satellite et le caméscope numérique.
- **CineMotion™ :** grâce à la technologie "2-3 Pull-Down", la fonction CineMotion vous permet d'obtenir un mouvement d'image fluide lorsque vous regardez des films ou d'autres sources vidéo du film.
- **Twin View™(Double Image)** : en utilisant le Multi-Image Driver (MID-X), la fonction Twin View permet de voir deux émissions côte à côte et donne la possibilité d'agrandir l'une ou l'autre image et d'écouter la fenêtre sélectionnée. Il est possible de regarder simultanément des images provenant de deux sources différentes (1080i, 720p, 480p ou 480i).
- **Steady Sound™ (Volume Auto) :** permet d'équilibrer le niveau sonore afin qu'il soit constant pendant les émissions et les messages publicitaires.
- **Blocage Parental** : la puce V-Chip permet aux parents de bloquer les émissions qui ne conviennent pas aux jeunes téléspectateurs.
- **Entrées pour composantes vidéo** : permet d'obtenir la meilleure qualité d'image vidéo lors des raccordements de lecteurs DVD (480p, 480i) au boîtier Digital Set-top (1080i, 720p, 480p, 480i).
- **Entrées S-VIDEO** : permet d'obtenir une image de très haute qualité pour les appareils raccordés.

- **Aperçu d'un canal préféré** : permet d'obtenir jusqu'à huit canaux sans quitter l'émission en cours.
- **Index de défilement des chaînes** : permet de visualiser et de choisir des canaux en faisant défiler des images sans quitter le canal en cours.
- **Mode Cinéma** : permet de visualiser des émissions 4:3 standard en mode cinéma (rapport d'aspect 16:9).
- **Auto Wide** : permet de sélectionner automatiquement le mode cinéma.
- **Flash Focus™** : permet d'ajuster automatiquement la convergence.
- **Interface visuelle numérique (DVI)**: Permet une connexion numérique protégée contre la copie (HDCP*) à d'autres appareils (par exemple un décodeur numérique) disposant d'une interface compatible. La prise d'entrée DVI-HDTV est conforme à la norme EIA-861 et n'est pas conçue pour une utilisation avec un ordinateur personnel.

Utilisation de ce manuel

Nous vous recommandons d'étudier attentivement le contenu des trois sections suivantes, dans cet ordre, pour vous assurer de bien comprendre le fonctionnement de votre nouveau téléviseur de projection.

1 Installation et connexion du téléviseur de projection

Cette section vous guide lors de la configuration de départ. Elle vous indique comment installer votre téléviseur de projection et comment connecter les nouveaux composants ainsi que l'antenne et le câble.

2 Utilisation des fonctions

Cette section vous montre comment faire fonctionner votre téléviseur de projection. Elle vous montre comment utiliser votre télécommande.

3 Utilisation des menus

Cette section vous apprend comment accéder aux menus à l'écran et comment ajuster les paramètres de votre téléviseur de projection.

Les instructions de ce manuel concernent la télécommande. Des commandes similaires se trouvent sur la console du téléviseur de projection.

* High-bandwidth Digital Content Protection (protection du contenu lors de la transmission numérique large bande)

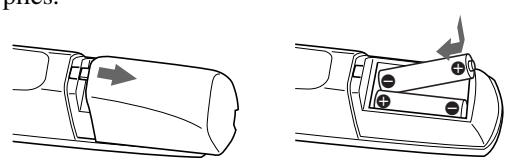
Installation et connexion du téléviseur de projection

Contenu

Cette boîte contient votre nouveau téléviseur de projection, une télécommande et deux piles AA. Cet emballage ne contient aucun câble de raccordement. Pour raccorder des appareils supplémentaires au téléviseur de projection, vérifiez les instructions de raccordement correspondant à l'installation souhaitée. Vous pourriez être obligé de vous procurer des câbles ou des diviseurs pour compléter l'installation correctement.

Insertion des piles dans la télécommande

Insérez les deux piles R6 (AA) (fournies) en faisant correspondre les signes + et – de la pile avec ceux du diagramme figurant dans le compartiment à piles.



✍ Retirer les piles pour éviter tout dommage lié à des fuites des piles lorsque vous savez que la télécommande ne sera pas utilisée durant une longue période.

✍ Manipuler la télécommande avec précaution. Ne la laissez pas tomber, ne la mouillez pas, ne la placer pas directement à portée des rayons du soleil ou dans un endroit humide.

✍ Votre télécommande peut être programmée pour être utilisée avec la plupart des équipements vidéo. (voir "Programmation de la télécommande" à la page 68)

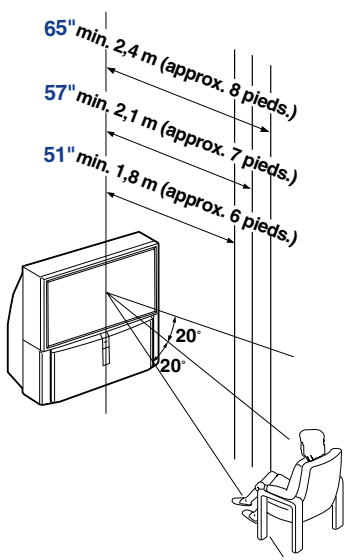
Transport de votre téléviseur de projection

Le transport du téléviseur de projection nécessite au moins trois (4) personnes.

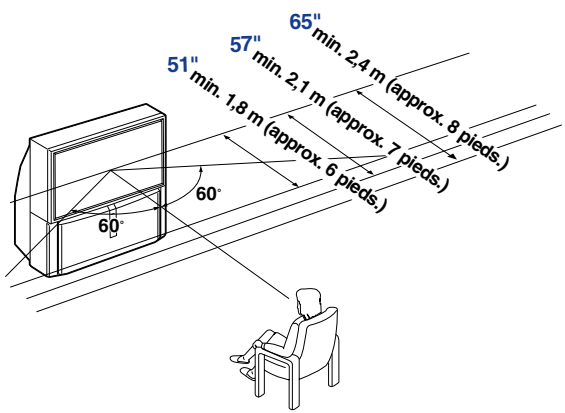
Le téléviseur de projection a été équipé de roulettes pour être facilement déplacé sur une surface solide.

Déplacer votre téléviseur de projection à l'aide des roulettes.

Installation du téléviseur de projection



Área de visualización recomendada (vertical)



Área de visualización recomendada (horizontal)

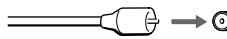
Types de connecteurs

Il est possible que vous deviez utiliser certains des types de connecteurs suivants lors de l'installation.

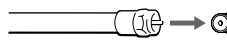
Câble coaxial

Câble TV standard et câble d'antenne

Type enfichable

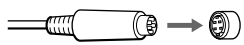


Type à vis

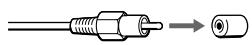


Câble S vidéo

Câble vidéo de haute qualité pour une qualité d'image améliorée



Câble audio/vidéo



Vidéo - jaune
Audio (gauche) - blanc
Audio (droit) - rouge

Certains lecteurs DVD sont équipés avec les trois connecteurs vidéo suivants:

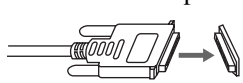
Y - vert
P_B (C_B, C_b ou B–Y) - bleu
P_R (C_R, C_r ou R–Y) - rouge

Câble CONTROL S

Les connexions CONTROL S sont exclusives aux produits Sony et améliorent le contrôle des produits Sony.

Câble DVI

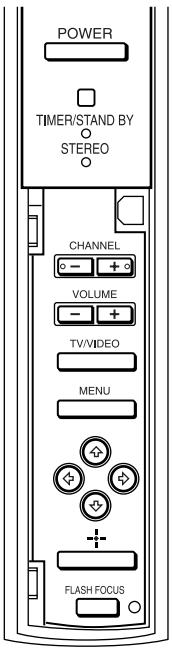
Connexion DVI pour un signal large bande protégé contre la copie



Commandes et raccordements du téléviseur

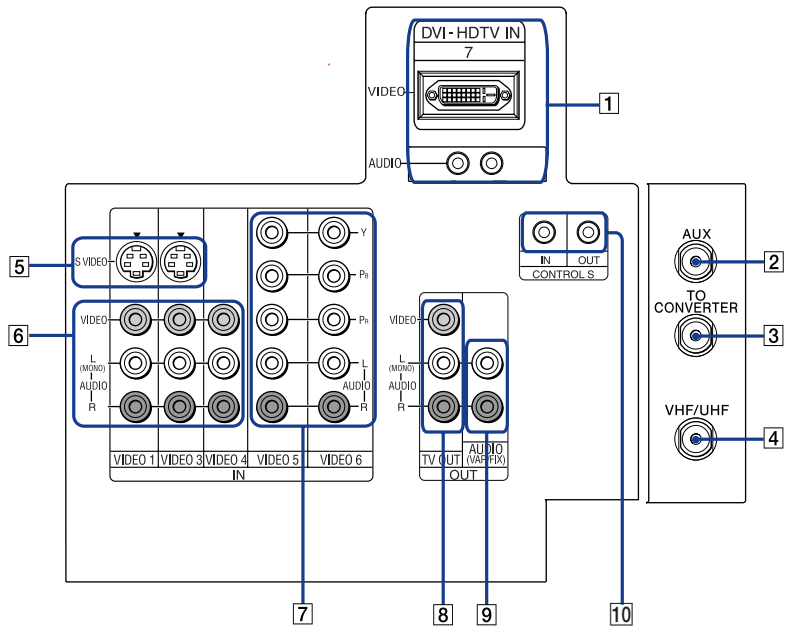
Commandes du menu du panneau avant

Les commandes du menu du panneau avant permettent d'accéder au menus affichés à l'écran sans utiliser la télécommande. Appuyer sur MENU pour faire afficher les menus à l'écran. Les touches flèchées déplacent le curseur sur les menus et la touche Select (⊹) sélectionne un élément du menu.

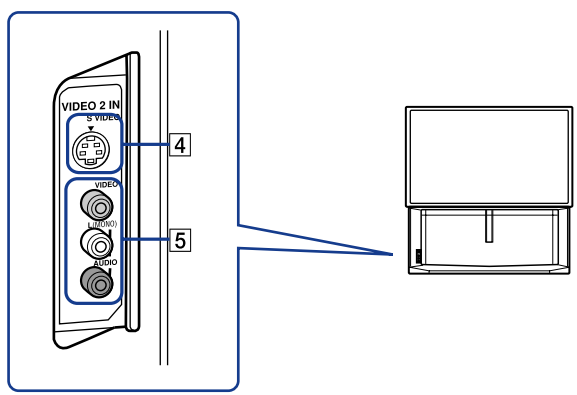


Connecteurs des panneaux arrière et avant du téléviseur de projection

Arrière du téléviseur de projection



Avant du téléviseur de projection



	Connexion	Description
1	DVI-HDTV VIDEO AUDIO R/L (VIDEO 7 IN)	Permet une connexion numérique protégée contre la copie (HDCP*) à d'autres appareils (par exemple un décodeur numérique) disposant d'une interface compatible. La prise d'entrée DVI-HDTV est conforme à la norme EIA-861 et n'est pas conçue pour une utilisation avec un ordinateur personnel. Reportez-vous au mode d'emploi fourni avec votre appareil pour plus de détails sur le raccordement et l'utilisation de cet appareil avec le téléviseur.
2	AUX	Permet de visionner des canaux locaux et câblés si le câblodistributeur n'offre pas les canaux locaux. Appuyer sur ANT de la télécommande pour passer facilement des canaux locaux aux canaux câblés. Les images provenant d'appareils raccordés à l'entrée AUX ne peuvent pas être visionnées.
3	TO CONVERTER	Permet de régler le téléviseur de projection pour pouvoir passer des canaux brouillés (par un décodeur) aux canaux normaux du câble (CATV). Utiliser cette prise au lieu d'un séparateur pour obtenir une image de meilleure qualité lorsqu'il faut passer des canaux câblés brouillés à ceux qui ne sont pas brouillés.
4	VHF/UHF	Parmet de raccorder à l'antenne UHF/VHF ou le câble.
5	S VIDEO (Arrière et avant)	Parmet de raccorder à la prise S VIDEO OUT du magnétoscope ou d'un autre appareil muni d'une prise S VIDEO. Offre une image de meilleure qualité que les prises VHF/UHF ou la prise vidéo IN.
6	VIDEO (L/R)/ AUDIO (Arrière et avant)	Permet de raccorder aux prises audio et vidéo OUT du magnétoscope ou de tout autre appareil vidéo. Une quatrième entrée vidéo (VIDEO 2) est située sur le panneau avant du téléviseur de projection.
7	Y/P_B/P_R (L/R)/ AUDIO	Permet de raccorder aux prises audio (L/R) et composantes vidéo (Y, P_B,P_R) de votre lecteur DVD ou du boîtier Digital Set-top.
8	TV OUT	Permet de raccorder à un récepteur audio/vidéo pour une meilleure maîtrise des appareils audio/vidéo (voir page 30). Pour obtenir davantage d'informations sur le raccordement, consultez le mode d'emploi fourni avec le récepteur audio/vidéo.
9	AUDIO OUT (VAR/FIX) L (MONO)/R	Permet de raccorder les entrées audio gauche et droite d'un appareil audio ou vidéo.
10	CONTROL S IN/OUT	Pour utiliser la télécommande du téléviseur de projection avec d'autres produits Sony, connectez la prise CONTROL S IN de l'appareil à la prise CONTROL S OUT du téléviseur de projection avec le câble CONTROL S. Pour utiliser la télécommande d'un autre produit Sony avec le téléviseur de projection, connectez la prise CONTROL S OUT de l'appareil à la prise CONTROL S IN du téléviseur de projection avec le câble CONTROL S.

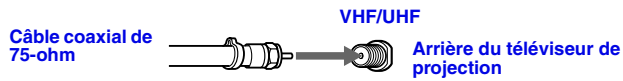
* High-bandwidth Digital Content Protection (protection du contenu lors de la transmission numérique large bande)

Raccordement de base (raccordement au câble ou à l'antenne)

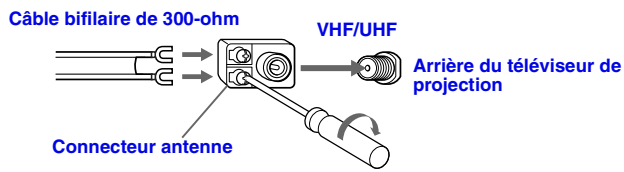
Raccordement direct au câble ou à l'antenne

Le choix de raccordement dépendra du type d'installation de votre habitation. Les maisons récentes sont équipées de câble coaxial standard (voir **A**); les maisons plus anciennes auront probablement un câble double de 300 ohm (voir **B**); d'autres maisons ont les deux systèmes (voir **C**).

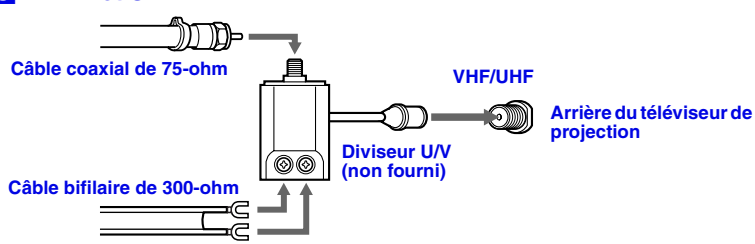
A **VHF uniquement, VHF/UHF ou câble**



B **VHF uniquement, UHF uniquement ou VHF/UHF**

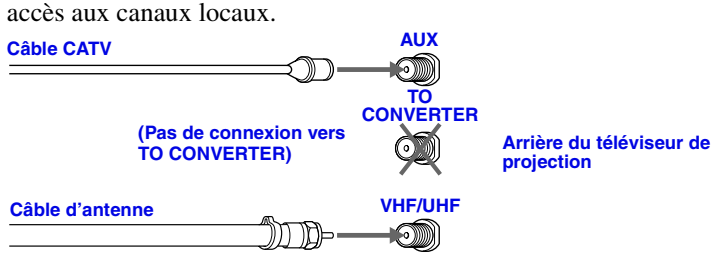


C **VHF et UHF**



Câble et antenne

Cet arrangement convient particulièrement si le câblodistributeur ne donne pas accès aux canaux locaux.



Choisir le mode CABLE ou antenne (ANT) en appuyant sur ANT de la télécommande.

✍ Pour une réception avec l'antenne, désactiver la fonction Câble (voir page 54) et procéder à l'Auto programmation (voir page 55).

Raccordements à l'aide d'un décodeur

Décodeur et câble

Ce raccordement de base est recommandé dans les situations suivantes :

- ❑ Le câblodistributeur ne brouille que certains canaux (télé payante par rapport aux canaux câblés réguliers) et il faut utiliser un décodeur.
- ❑ Pour profiter de la fonction Twin View.

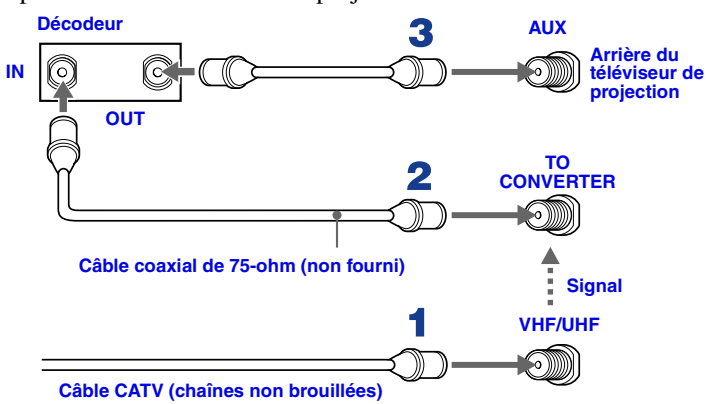
Voici ce que permet ce réglage :

- ❑ Utilisation de la télécommande du téléviseur de projection pour changer les canaux à partir du décodeur lorsque le signal est brouillé.
- ❑ Utilisation de la télécommande du téléviseur de projection pour changer les canaux à partir du téléviseur de projection lorsque le signal n'est pas brouillé. (Le syntoniseur du téléviseur de projection offre une meilleure réception de signal que le décodeur.)
- ❑ Utilisation de la fonction Twin View. (Lorsque tous les canaux sont acheminés par le décodeur, un seul canal est envoyé au téléviseur de projection et il est donc impossible d'utiliser les fonctions Twin View ou Channel Index pour votre décodeur.

1 Raccorder un câble du câblodistributeur à la prise VHF/UHF du téléviseur.

2 Utiliser un câble coaxial pour raccorder la prise TO CONVERTER du téléviseur de projection à la prise IN du décodeur. Le convertisseur interne du téléviseur de projection permet de passer des signaux non brouillés arrivant directement au téléviseur de projection aux signaux brouillés arrivant du décodeur. Il n'est plus nécessaire d'installer un diviseur.

3 Utiliser un câble coaxial pour raccorder la prise OUT du décodeur à la prise AUX du téléviseur de projection.



✍ Appuyer sur ANT de la télécommande pour passer des canaux reçus par le décodeur (brouillés) à ceux arrivant directement au téléviseur (non brouillés).

Décodeur seulement

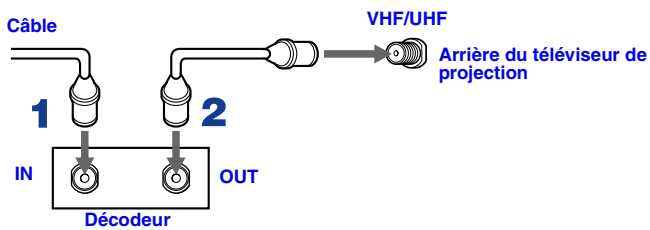
Utiliser ce raccordement dans les situations suivantes :

- Vous êtes abonné à un service de câblodistribution qui utilise des signaux brouillés ou encodés nécessitant un décodeur pour obtenir tous les canaux.
- Vous n'avez pas l'intention de raccorder d'autres appareils audio ou vidéo à votre téléviseur de projection.

Lorsque tous les canaux sont acheminés par le décodeur, un seul canal non brouillé arrive au téléviseur de projection. La fonction Twin View ne pourra donc pas être utilisée. Si certains canaux sont brouillés mais que d'autres ne le sont pas, le raccordement décrit en page 17 conviendra peut-être mieux.

1 Raccorder le câble coaxial du câblodistributeur à la prise IN du décodeur.

2 Utiliser un câble coaxial pour raccorder la prise OUT du décodeur à la prise VHF/UHF du téléviseur.



Ainsi, mettez Câble sur OUI dans le menu Canal. (voir page 54)

✍ La télécommande Sony peut être programmée pour faire fonctionner le décodeur. (voir "Programmation de la télécommande" à la page 68)

✍ Pour changer les canaux à partir du décodeur, régler le téléviseur de projection sur le canal 3 ou 4 selon la sortie de canal du décodeur. Pour contrôler toute la sélection de canaux à partir du décodeur, utiliser la fonction Canal fixe pour régler le téléviseur de projection sur le canal 3 ou 4. (voir page 55)

Le réglage Canal fixe du menu Canal (voir "Utilisation du menu Canal" à la page 54) évitera le changement accidentel des canaux à partir du téléviseur de projection.

Raccordement d'un magnétoscope et d'un câble

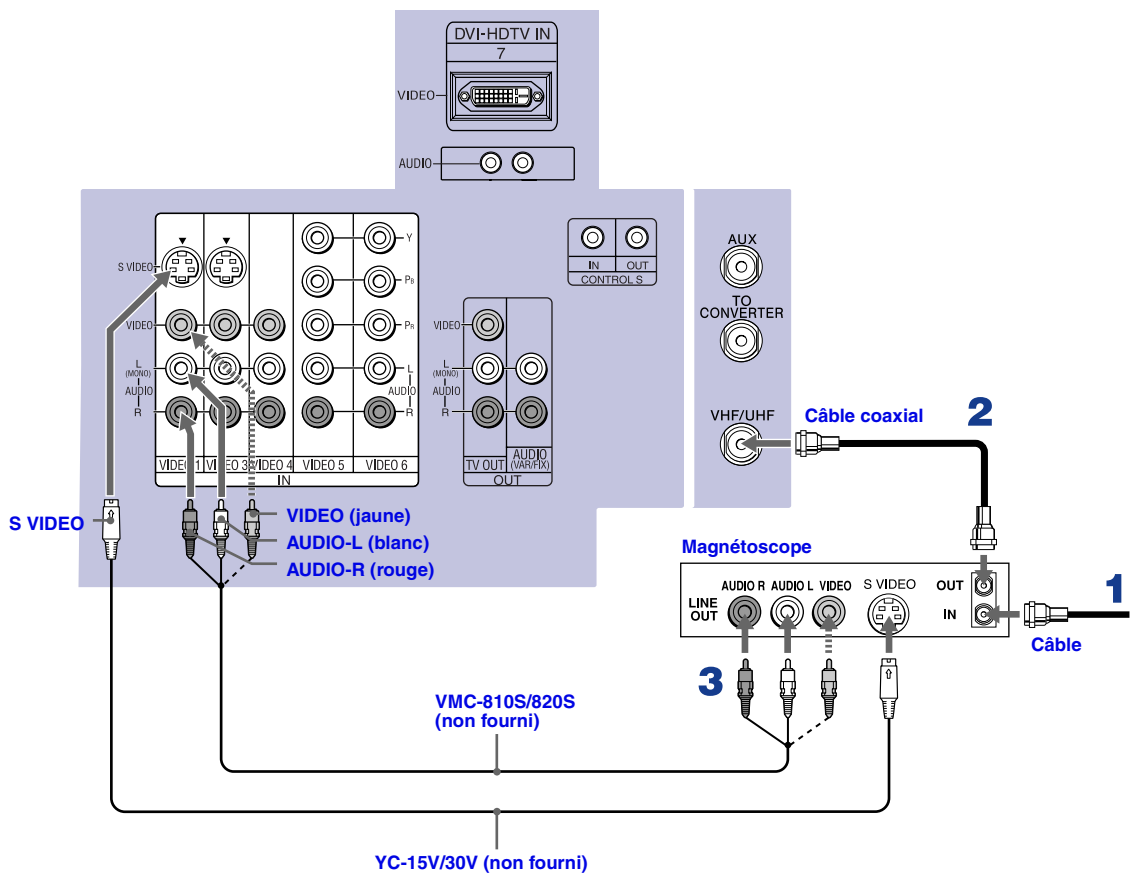
Choisir ce raccordement dans la situation suivante :

- ❑ Abonnement auprès d'un câblodistributeur qui ne nécessite pas l'installation d'un décodeur.

Débrancher toute source d'alimentation avant d'effectuer toute connexion.

1. Raccorder le câble du téléviseur à la prise IN du magnétoscope.
2. Utiliser un câble coaxial pour raccorder la prise OUT du magnétoscope à la prise UHF/VHF du téléviseur.
3. Utiliser des câbles AUDIO et S VIDEO pour raccorder les prises AUDIO et S VIDEO OUT du magnétoscope aux prises AUDIO et S VIDEO IN du téléviseur de projection.

Arrière du téléviseur de projection



✍ Si votre magnétoscope n'est pas équipé de S VIDEO, utiliser un câble VIDEO (jaune) au lieu du câble S VIDEO.

Raccordement d'un magnétoscope et d'un décodeur

Choisir ce raccordement dans les situations suivantes :

- ❑ Le câblodistributeur ne brouille que certains canaux (télé payante par rapport aux canaux câblés réguliers) et il faut utiliser un décodeur.
- ❑ Pour profiter de la fonction Twin View.

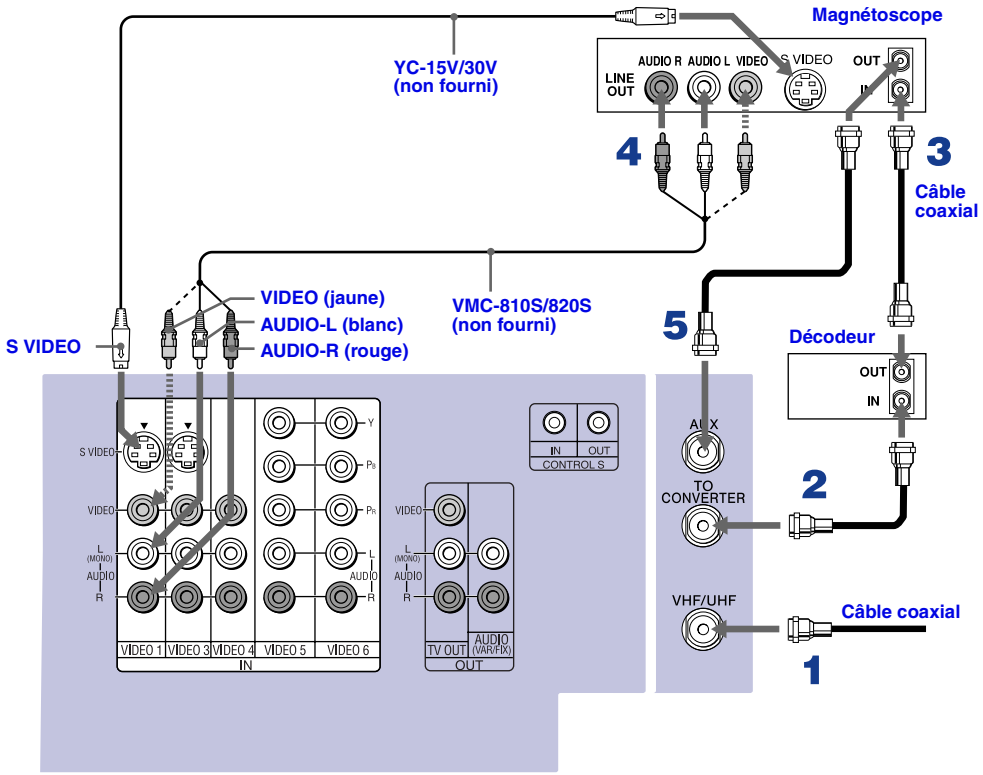
Voici ce que permet ce réglage :

- ❑ Utilisation de la télécommande du téléviseur de projection pour changer les canaux à partir du décodeur lorsque le signal est brouillé. Pour programmer votre télécommande Sony pour l'utiliser avec votre décodeur, voir "Programmation de la télécommande" à la page 68.
- ❑ Utilisation de la télécommande du téléviseur de projection pour changer les canaux à partir du téléviseur de projection lorsque le signal n'est pas brouillé. (Le syntoniseur du téléviseur de projection offre une meilleure réception de signal que le décodeur.)
- ❑ Utilisation de la fonction Twin View. (Lorsque tous les canaux sont acheminés par le décodeur, un seul signal arrive au téléviseur de projection et il est donc impossible d'utiliser la fonction Twin View.)

Débrancher toute source d'alimentation avant d'effectuer toute connexion.

1. Raccorder le câble du câblodistributeur à la prise VHF/UHF du téléviseur de projection.
2. Utiliser un câble coaxial pour raccorder la prise TO CONVERTER du téléviseur de projection à la prise IN du décodeur. Le convertisseur interne du téléviseur de projection permet de passer des signaux non brouillés arrivant directement au téléviseur de projection aux signaux brouillés arrivant du décodeur. Il n'est plus nécessaire d'installer un diviseur.
3. Utiliser un câble coaxial pour raccorder la prise OUT du décodeur à la prise IN du magnétoscope.
4. Utiliser des câbles AUDIO et S VIDEO pour raccorder les prises AUDIO et VIDEO OUT du magnétoscope aux prises AUDIO et S VIDEO IN du téléviseur de projection.
5. Utiliser un câble coaxial pour raccorder la prise OUT du magnétoscope à la prise AUX de téléviseur de projection.

✍ Pour obtenir les canaux brouillés, régler le téléviseur en position AUX 3 ou 4 (selon le réglage de sortie du décodeur). Utiliser le décodeur pour changer le canal.



Arrière du téléviseur de projection

✍ Si votre magnétoscope n'est pas équipé de S VIDEO, utiliser un câble VIDEO (jaune) au lieu du câble S VIDEO.

✍ Il est impossible de changer de chaîne sur le magnétoscope. Régler votre téléviseur de projection et votre magnétoscope sur le canal 3 ou 4, selon la sortie de canal de votre décodeur.

✍ Appuyer sur ANT de la télécommande pour passer des canaux arrivant au décodeur (brouillés) aux canaux arrivant directement au téléviseur (non brouillés).

Le réglage Canal fixe du menu Canal (voir "Utilisation du menu Canal" à la page 54) évitera le changement accidentel des canaux à partir du téléviseur de projection.

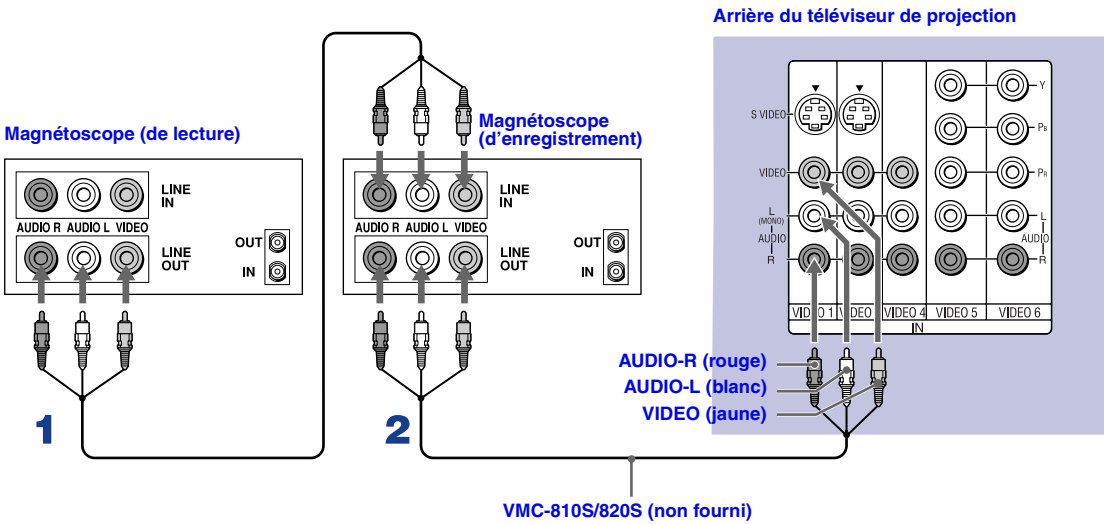
Raccordement de deux magnétoscopes pour l'édition de cassettes

En raccordant deux magnétoscopes entre eux, il est possible d'enregistrer d'un magnétoscope à l'autre tout en utilisant le téléviseur pour surveiller ce qui est en cours d'enregistrement.

Débrancher toute source d'alimentation avant d'effectuer toute connexion.

1 Utiliser des câbles AUDIO et VIDEO pour raccorder les prises AUDIO et VIDEO OUT du magnétoscope de lecture aux prises AUDIO et VIDEO IN du magnétoscope d'enregistrement.

2 Utiliser des câbles AUDIO et VIDEO pour raccorder les prises AUDIO et VIDEO OUT du magnétoscope d'enregistrement aux prises AUDIO et VIDEO IN du téléviseur de projection.



✍ Pour procéder à l'édition d'une cassette, régler le téléviseur de projection sur l'entrée vidéo choisie pour la lecture en appuyant sur la touche TV/VIDEO de la télécommande.

✍ Si le raccordement de l'entrée vidéo de votre magnétoscope doit être changé, consulter le manuel d'instructions du magnétoscope pour obtenir les directives.

✍ Si le magnétoscope est muni d'une prise S VIDEO, pour une meilleure qualité d'image, utiliser un connecteur S VIDEO au lieu du câble vidéo jaune du câble combiné A/V. Utiliser un câble S VIDEO pour raccorder la prise S VIDEO OUT du magnétoscope de lecture à la prise S VIDEO IN du magnétoscope d'enregistrement. S VIDEO ne fournit pas la trame sonore, un câble audio doit être raccordé pour que le son soit enregistré.

✍ Il n'est pas possible d'enregistrer les signaux provenant d'appareils connectés aux entrées Y, PB, PR.

Raccordement d'un récepteur satellite

Débrancher toute source d'alimentation avant d'effectuer toute connexion

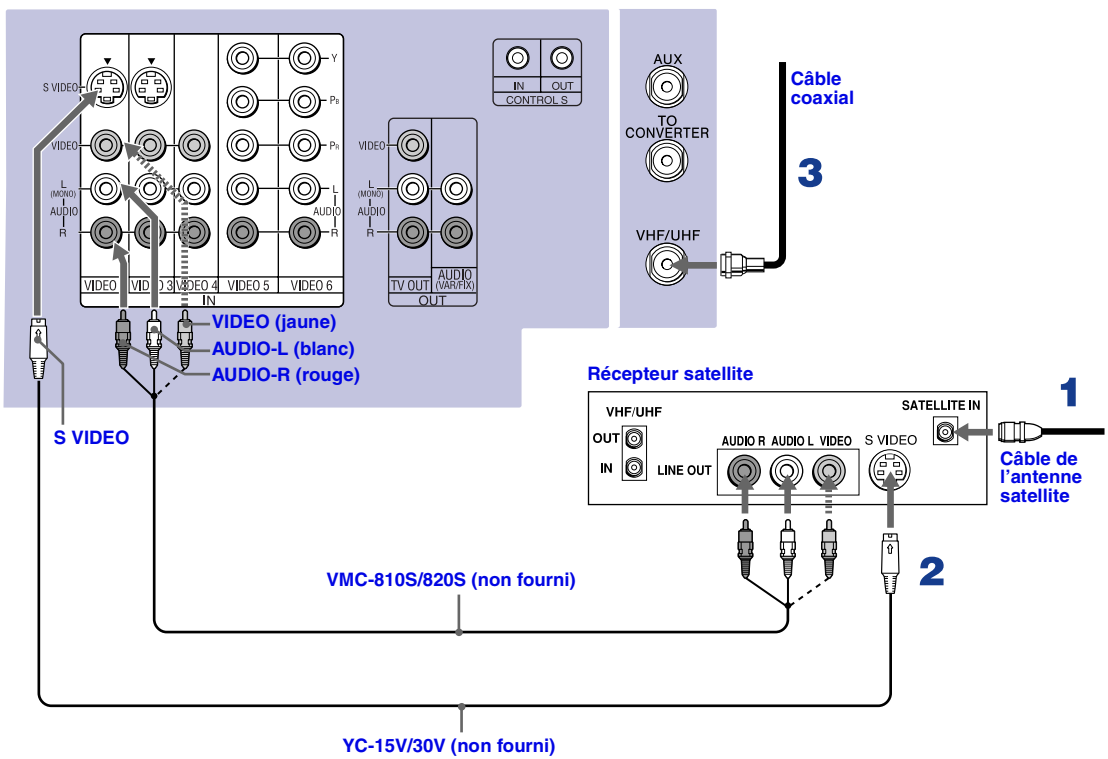
1 Raccorder le câble de l'antenne satellite à la prise SATELLITE IN du récepteur satellite.

2 Utiliser des câbles AUDIO et S VIDEO pour raccorder les prises AUDIO et S VIDEO OUT du récepteur satellite aux prises AUDIO et S VIDEO IN du téléviseur de projection.

3 Raccorder un câble coaxial de l'antenne ou du câble à la prise VHF/UHF du téléviseur de projeciton.

✍ Si votre récepteur satellite n'est pas équipé de S VIDEO, utiliser un câble VIDEO (jaune) au lieu du câble S VIDEO.

Arrière du téléviseur de projection



Raccordement d'un récepteur satellite et d'un magnétoscope

Débrancher toute source d'alimentation avant d'effectuer toute connexion.

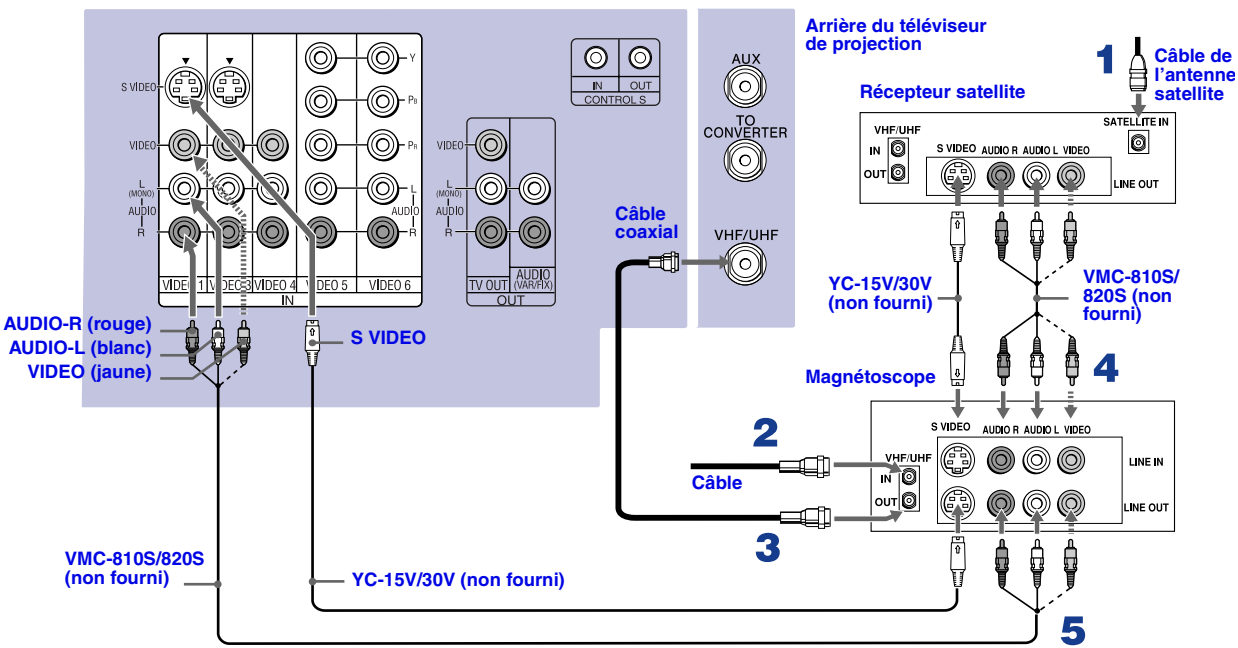
1 Raccorder le câble de l'antenne satellite à la prise SATELLITE IN du récepteur satellite.

2 Raccorder le câble CATV à la prise VHF/UHF IN du magnétoscope.

3 Utiliser un câble coaxial pour raccorder la prise OUT du magnétoscope à la prise VHF/UHF du téléviseur.

4 Utiliser des câbles AUDIO et S VIDEO pour raccorder les prises AUDIO et S VIDEO OUT du récepteur satellite aux prises AUDIO et S VIDEO IN du magnétoscope.

5 Utiliser des câbles AUDIO et S VIDEO pour raccorder les prises AUDIO et S VIDEO OUT du récepteur satellite aux prises AUDIO et S VIDEO IN du téléviseur.



✍ Vérifier si le réglage de l'entrée vidéo du magnétoscope est correct. Pour plus de détails, consulter le manuel d'instructions du magnétoscope.

✍ Utiliser TV/VIDEO pour sélectionner
- VIDEO 1 pour visionner les émissions provenant de l'antenne satellite ou du magnétoscope (le magnétoscope doit est allumé).
- VHF/UHF pour visionner les émissions câblées.

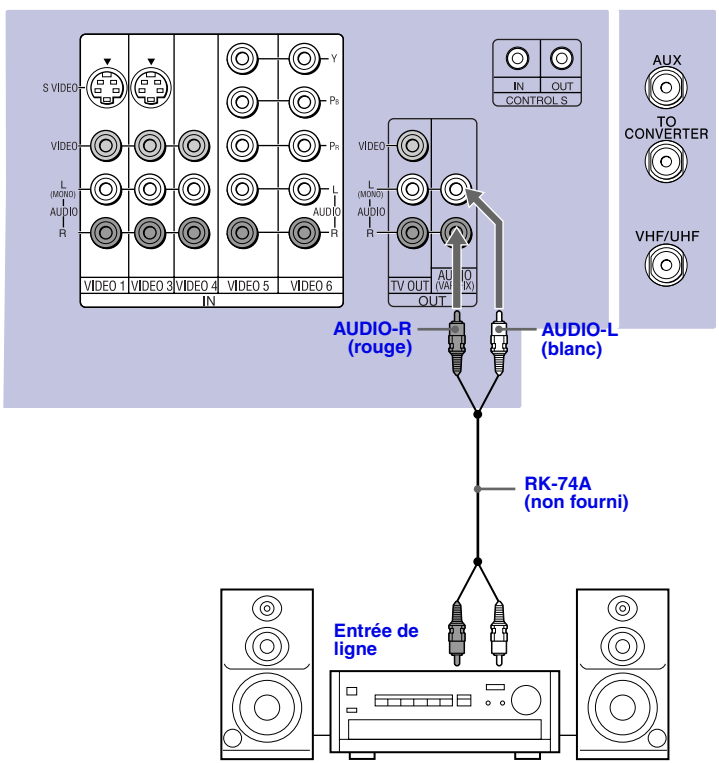
✍ Si votre magnétoscope ou récepteur satellite n'est pas équipé de S VIDEO, utiliser un câble VIDEO (jaune) au lieu du câble S VIDEO.

Raccordement du récepteur audio

Débrancher toute source d'alimentation avant d'effectuer toute connexion.

Utiliser les câbles audio pour raccorder les prises AUDIO OUT (VAR/FIX) du téléviseur de projection aux prises audio LINE IN du récepteur audio.

Arrière du téléviseur de projection



Raccordement d'un lecteur DVD avec les connecteurs de composantes vidéo

Ce raccordement est recommandé dans la situation suivante :

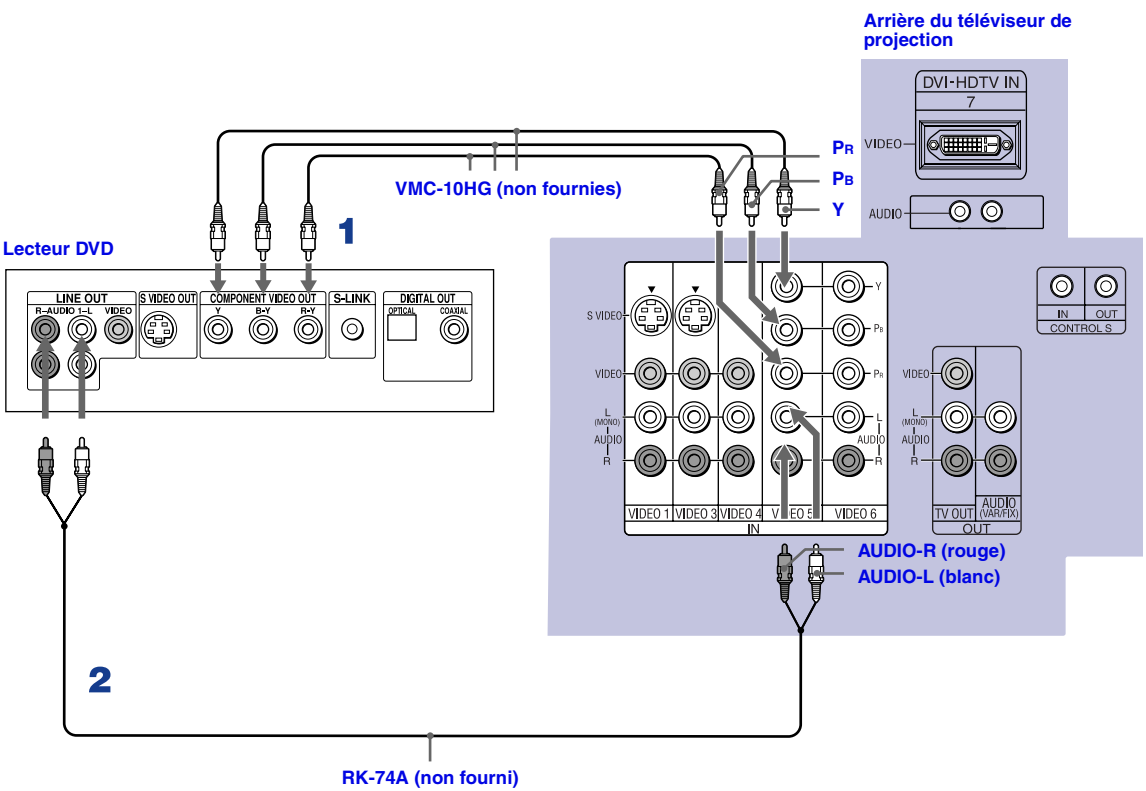
- ❑ Le lecteur DVD possède des prises de composantes vidéo (Y, B-Y, R-Y).

Débrancher toute source d'alimentation avant d'effectuer toute connexion.

1 Utiliser trois câbles de composantes vidéo séparés pour raccorder les prises Y, B-Y et R-Y du lecteur DVD aux prises Y, PB et PR du téléviseur de projection. Utiliser les connexions VIDEO IN 5 ou 6.

> ✍ Les prises Y, B-Y et R-Y de certains lecteurs DVD sont parfois étiquetées Y, CB et CR ou encore Y, PB et PR. Dans ce cas, utiliser le code couleur pour effectuer les raccordements.

2 Utiliser un câble audio pour raccorder les prises audio OUT du lecteur DVD aux prises Audio IN du téléviseur de projection. Prendre soin d'utiliser les mêmes rangées d'entrées que celles des raccordements vidéo (VIDEO IN 5 ou 6).



Raccordement d'un lecteur DVD avec des connecteurs A/V

Choisir ce raccordement dans la situation suivante :

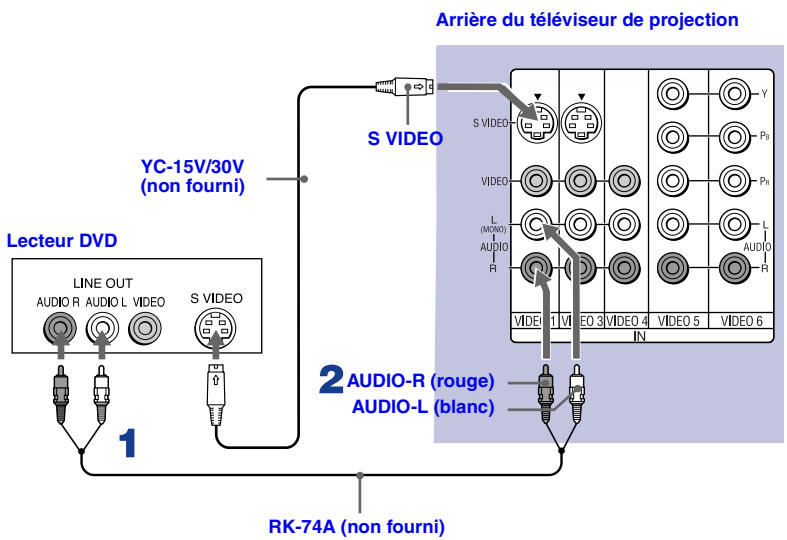
- ❑ Le lecteur DVD ne possède pas de prises de composantes vidéo (Y, PB, PR).

✍ Si le lecteur de DVD est muni de connecteurs de composantes vidéo, utiliser le raccordement présenté en page 26 pour une image de meilleure qualité.

Débrancher toute source d'alimentation avant d'effectuer toute connexion.

1 Utiliser des câbles audio pour raccorder les prises audio OUT du lecteur de DVD aux prises AUDIO IN du téléviseur de projection.

2 Utiliser un câble S VIDEO pour raccorder la prise S VIDEO du lecteur de DVD à la prise S VIDEO du téléviseur de projection.



✍ Utiliser TV/VIDEO pour alterner entre les entrées du magnétoscope, du lecteur DVD et du téléviseur câblé.

✍ Si votre magnétoscope n'est pas équipé de S VIDEO, utiliser un câble VIDEO (jaune) au lieu du câble S VIDEO.

Raccordement d'un récepteur de télévision numérique

Lire attentivement le manuel d'instruction du boîtier Set-top.

Certains récepteurs de télévision numérique sont équipés d'une prise DVI. Reportez-vous au mode d'emploi du récepteur de télévision numérique pour les directives d'installation utilisant cette connexion.

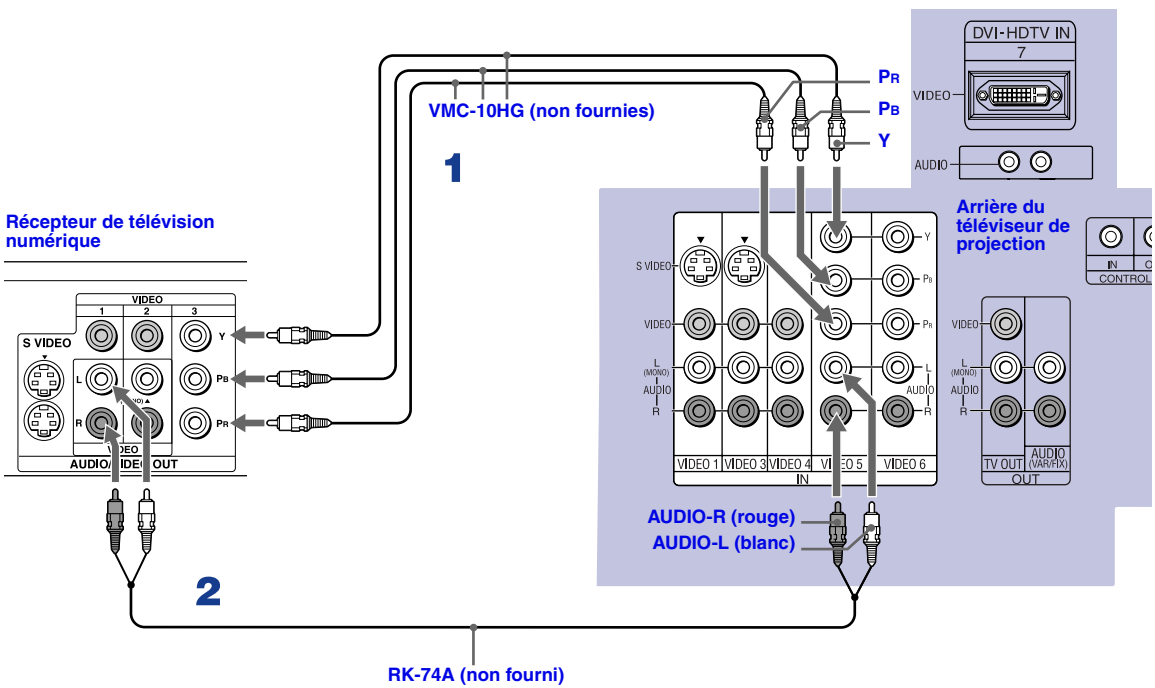
Débrancher toute source d'alimentation avant d'effectuer toute connexion.

1 Utiliser les différents câbles des trois composantes vidéo pour raccorder les prises Y, PB et PR du boîtier Digital TV Set-top au téléviseur de projection.

✍ Les prises Y, PB et PR ne fournissent pas le son, des câbles audio doivent donc être raccordés pour pouvoir entendre le son.

Un raccordement de composants vidéo est nécessaire pour visualiser des formats 480p, 720p et 1080i. Il est également possible d'utiliser des raccordements S VIDEO ou de composantes vidéo. Cependant, le composant vidéo (Y, PB, PR) assure la meilleure qualité d'image de tous les types de formats.

2 Utiliser un câble audio pour raccorder les prises audio OUT du boîtier Digital TV Set-top aux prises AUDIO IN du téléviseur de projection.



✍ Il n'est pas possible d'enregistrer les signaux provenant d'un appareil raccordé aux connecteurs Y, PB et PR.

✍ Ce téléviseur de projection n'est pas compatible avec les récepteurs de télévision numériques configurés avec des connecteurs de sortie RVB ou VGA.

✍ La prise DVI est compatible avec la norme EIA-861 et n'est pas conçue pour une utilisation avec un ordinateur personnel.

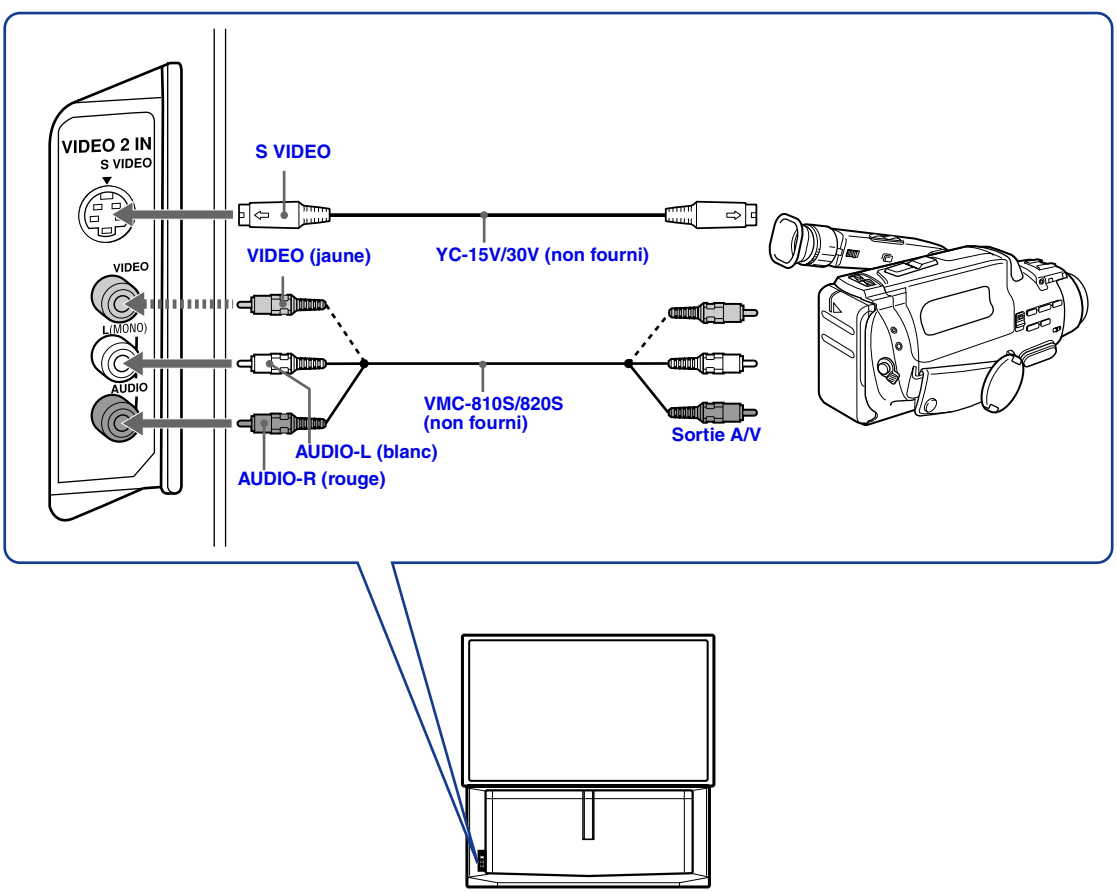
Raccordement d'un caméscope

Pour faciliter le raccordement du caméscope, les prises d'entrée audio et vidéo sont situées sur le devant du téléviseur de projection (illustrées ci-dessous). Cependant, il est aussi possible de faire les raccordements du caméscope aux prises AUDIO et VIDEO IN situées à l'arrière du téléviseur de projection.

Utiliser des câbles AUDIO et S VIDEO pour raccorder les prises AUDIO et S VIDEO OUT du caméscope aux prises AUDIO et S VIDEO IN du téléviseur de projection.

✍ Si le caméscope est monophonique, raccorder la sortie gauche du caméscope à la prise AUDIO-L (MONO) du téléviseur de projection.

✍ Si votre caméscope n'est pas équipé de S VIDEO, utiliser un câble VIDEO (jaune) au lieu du câble S VIDEO.



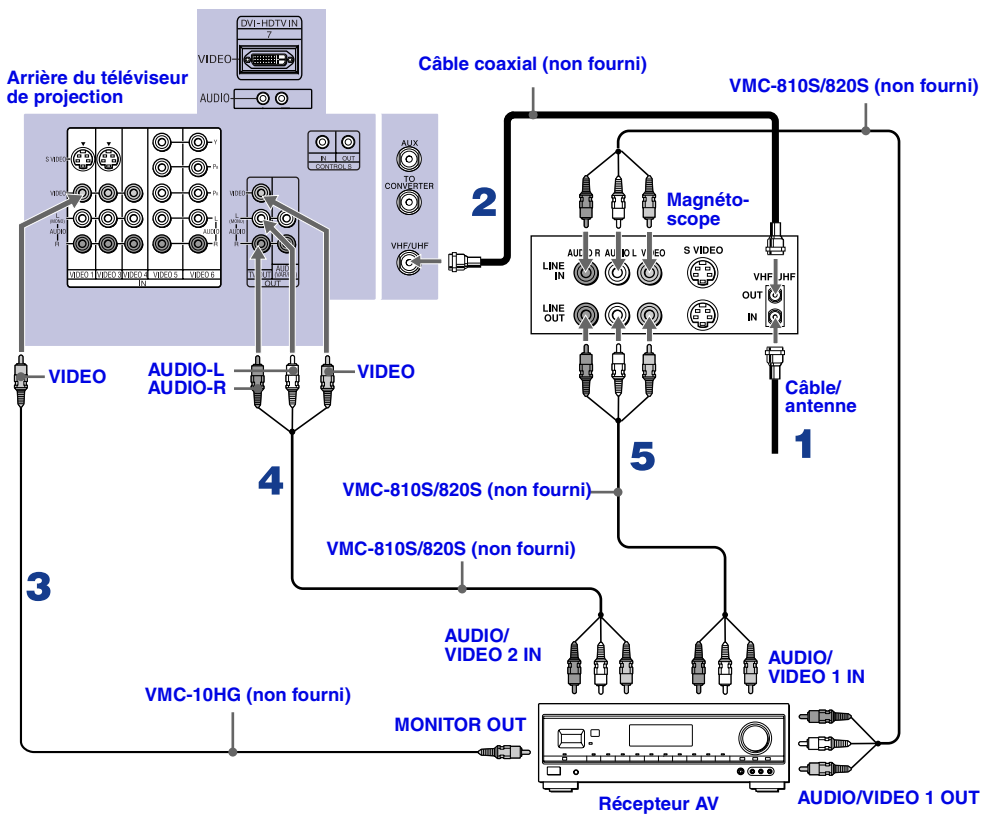
Connexion d'un récepteur AV

Pour augmenter le contrôle de tous les équipements audio et vidéo, connecter un récepteur AV.

✍ Modifier "Etiquette vidéo" par "Récepteur" pour l'entrée VIDEO 1 (voir page 61).

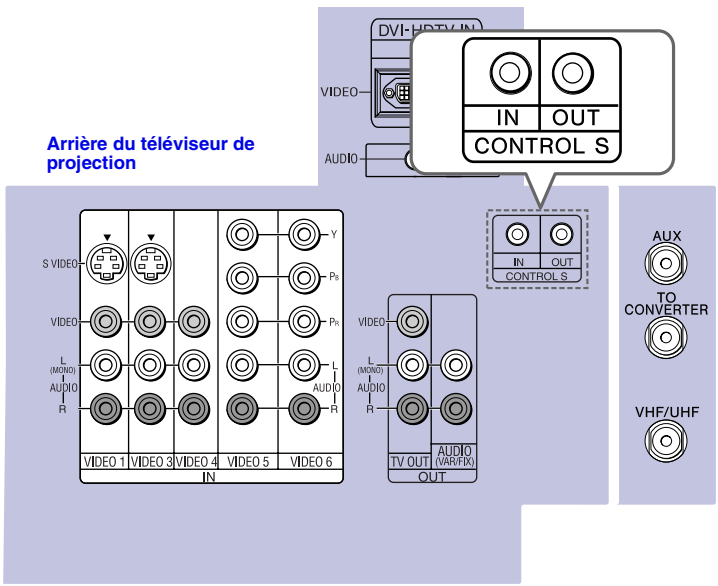
Débrancher toute source d'alimentation avant d'effectuer toute connexion.

1. Relier le câble coaxial depuis la prise du câble entrant ou de l'antenne à la prise IN du magnétoscope.
2. Avec un câble coaxial, raccorder la prise OUT du magnétoscope à la prise VHF/UHF du téléviseur de projection.
3. A l'aide d'un câble VIDEO, raccorder VIDEO de VIDEO 1 IN au téléviseur de projection à MONITOR OUT du récepteur AV.
4. A l'aide d'un câble AUDIO/VIDEO, raccorder TV OUT du téléviseur de projection à AUDIO/VIDEO 2 IN du récepteur AV.
5. A l'aide d'un câble AUDIO/VIDEO, raccorder l'équipement vidéo au récepteur AV.
6. Sélectionner le menu Réglage et régler "Étiquette vidéo" sur "Récepteur" pour régler votre téléviseur sur le récepteur AV (voir "Etiquette Vidéo" à la page 61).



Utilisation de la fonction CONTROL S

La fonction CONTROL S permet de commander le téléviseur de projection et d'autres appareils Sony à l'aide d'une seule télécommande. En plus de permettre de commander plusieurs appareils avec une seule télécommande, la fonction CONTROL S permet de diriger la télécommande vers le téléviseur de projection au lieu d'avoir à la diriger vers les autres appareils, qui peuvent être cachés ou gardés hors de portée.



Réglage automatique du téléviseur de projection

Après avoir terminé le raccordement du téléviseur de projection, procéder à l'Auto réglage des canaux. L'écran Auto réglage apparaît la première fois que vous allumez le téléviseur de projection après avoir terminé les raccordements. Le réglage des canaux peut se faire ultérieurement - voir les fonctions Auto programmation du menu Canal (en page 55).

✍ Il n'est pas possible d'utiliser la fonction Auto réglage pour les installations utilisant un décodeur pour la sélection de tous les canaux.

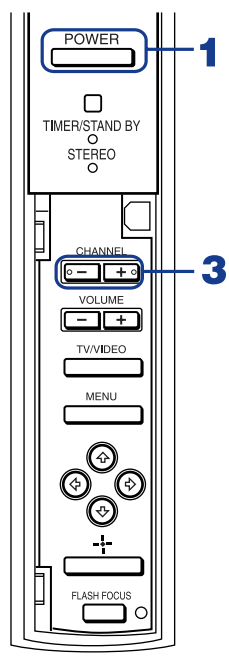
Utilisation de l'auto réglage

1 Appuyer sur POWER sur le panneau avant du televiseur ou sur la télécommande pour allumer le téléviseur de projection.

2 Appuyer sur TV (FUNCTION) sur la télécommande. Un témoin rouge s'allume brièvement.

3 Appuyer sur CH+ du téléviseur de projection pour procéder à l'Auto réglage ou appuyer sur CH– pour quitter. Si vous utilisez les touches de la télécommande, n'utiliser que les touches principales de sélection ( ).

Panneau avant du téléviseur de projection



✍ Vous pouvez exécuter Auto programmation en le sélectionnant dans le menu Canal, comme décrit à la page 55.

Ajustement automatique de la convergence —FLASH FOCUS™—

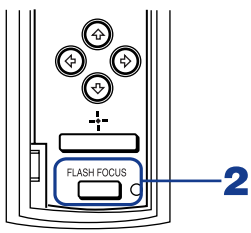
L'image du tube de projection apparaît sur l'écran en trois couleurs (rouge, vert et bleu). Si elles ne convergent pas, la couleur est mauvaise et l'image est floue.

Avant d'utiliser votre téléviseur de projection, n'oubliez pas d'ajuster la convergence.

La fonction FLASH FOCUS vous permet d'ajuster automatiquement la convergence.

✍ Il est recommandé d'exécuter la procédure FLASH FOCUS 30 minutes environ après la première mise en service du téléviseur de projection.

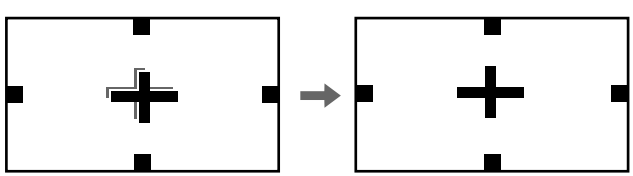
Panneau avant du téléviseur de projection



1 Capter un programme de télévision ou de télédistribution.

2 Appuyer sur FLASH FOCUS.

Une croix s'affiche, comme indiqué ci-dessous, et FLASH FOCUS commence à fonctionner. L'ajustement est terminé lorsque la croix devient blanche et vous revenez au programme que vous regardiez.



✍ Vous ne pouvez effectuer aucune autre opération tant que le cycle FLASH FOCUS n'est pas terminé.

✍ Si vous exécutez une autre opération alors qu'un cycle FLASH FOCUS est en cours, le cycle FLASH FOCUS est annulé.

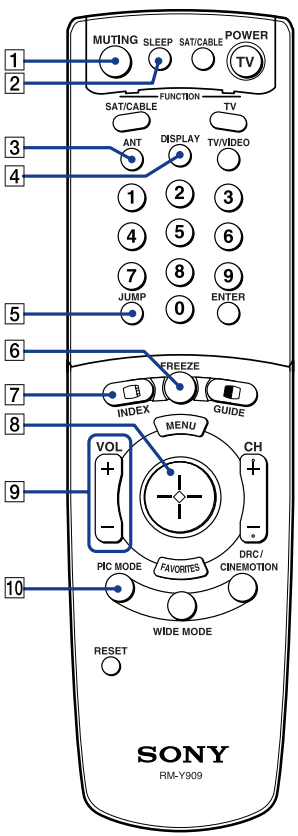
✍ Des haut-parleurs non blindés ou des objets métalliques peuvent entraîner une distorsion de l'image s'ils sont placés à proximité du téléviseur de projection.

Utilisation des fonctions

Utilisation de la télécommande

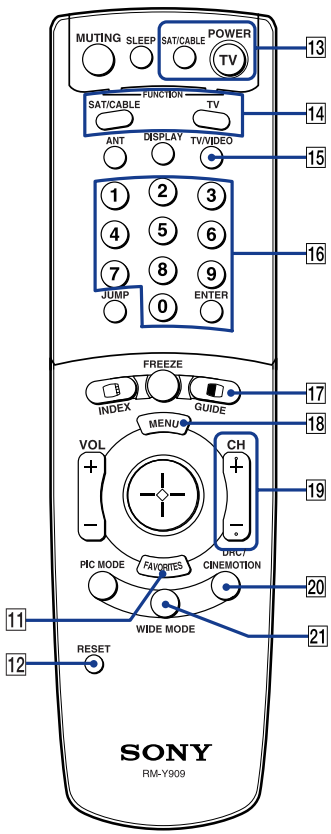
Le tableau suivant donne la description des touches de la télécommande utilisées pour les fonctions avancées.

Description des touches



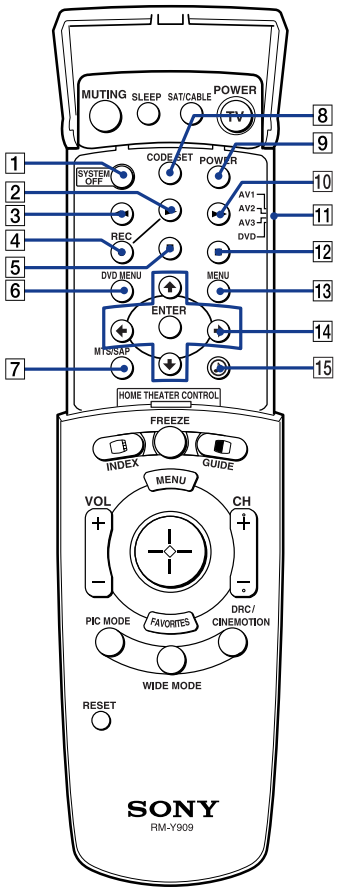
Panneau externe

Touche	Description
1 MUTING (sourdine)	Appuyer pour mettre le son en sourdine. Appuyer de nouveau ou appuyer sur VOL + pour ramener la trame sonore.
2 SLEEP (veille)	Appuyer plusieurs fois jusqu'à ce que le téléviseur de projection affiche en minutes (15, 30, 45, 60 ou 90) la durée pendant laquelle le téléviseur de projection restera allumé avant de s'éteindre automatiquement. Annuler en appuyant jusqu'à ce que SLEEP OFF apparaisse ou en mettant l'appareil hors tension. Si la fonction SLEEP a été activée, appuyer une fois sur la touche pour connaître le nombre de minutes restantes.
3 ANT	Remplace l'entrée VHF/UHF par l'entrée AUX.
4 DISPLAY (affichage)	Appuyer une fois pour afficher l'heure, l'identification du canal (si réglé) et le numéro du canal. Appuyer de nouveau pour désactiver la fonction d'affichage. Voir page 58 pour le réglage de l'heure.
5 JUMP (basculer)	Appuyer pour sauter d'un canal à un autre. Le téléviseur de projection alternera entre le canal syntonisé et le dernier canal sélectionné.
6 FREEZE (figer)	Fige l'image dans la fenêtre. Appuyer de nouveau pour ramener l'image en mode normal.
7 INDEX	Appuyer pour passer en mode Index de défilement. Vous pouvez visualiser et sélectionner une des chaînes reçues défilant à l'écran, sans quitter la chaîne en cours.
8	La manette permet de déplacer le curseur sur l'écran. Appuyer au centre de la manette pour faire une sélection.
9 VOL +/–	Règle le volume.
10 PIC MODE (mode image)	Appuyer plusieurs fois pour choisir parmi les modes d'image vidéo offerts : Éclatant, Standard, Cinéma et Pro. Cette fonction est aussi offerte par le menu Vidéo. Pour plus de détails, voir "Sélection des options vidéo" à la page 50.



Pour faire défiler rapidement les canaux, maintenir CH+ ou CH- enfoncée.

Touche	Description
11 FAVORITES	Affiche la liste des canaux préférés. Pour plus de détails, voir “Utilisation de la fonction Canaux Préférés” à la page 40.
12 RESET (réinitialiser)	Dans un menu, appuyer sur cette touche pour réinitialiser le téléviseur de projection aux réglages du fabricant.
13 touches POWER (vert)	Allume et éteint le téléviseur de projection ainsi que les appareils audio et vidéo programmés dans la télécommande. Pour les instructions, voir “Programmation de la télécommande” à la page 68.
14 touches FUNCTION	Sélectionnent l’appareil contrôlé par la télécommande (TV, SAT/CABLE). Le voyant s’allume momentanément lorsque la touche est enfoncée pour indiquer l’appareil que la télécommande contrôle.
15 TV/VIDEO	Passe en revue les entrées vidéo raccordées au téléviseur de projection : TV, VIDEO 1, VIDEO 2, VIDEO 3, VIDEO 4, VIDEO 5, VIDEO 6 et VIDEO 7.
16 Touches 0 à 9 et ENTER	Appuyer sur les touches 0 à 9 pour sélectionner un canal. Le canal change dans les 2 secondes. Appuyer sur ENTER pour une sélection immédiate.
17 ◑	Active ou désactive la fonction Twin View. Pour plus de détails, voir “Utilisation de la fonction Twin View™” à la page 41.
GUIDE	Affiche le guide de programmation de satellite.
18 MENU	Appuyer pour afficher le menu du téléviseur de projection. Appuyer de nouveau pour quitter le menu.
19 CH +/–	Passe en revue les canaux.
20 DRC/ CINEMOTION	Appuyer plusieurs fois pour naviguer entre les modes d’image à haute résolution disponibles : Entrelacé, Progressif et CineMotion. Pour obtenir davantage de détails, reportez-vous à la section “Utilisation du menu Vidéo” à la page 50.
21 WIDE MODE	Appuyer pour sélectionner les modes grand écran : Wide Zoom, Normal, Plein écran et Zoom. Pour plus d’informations, reportez-vous à “Utilisation du mode cinéma” à la page 47.



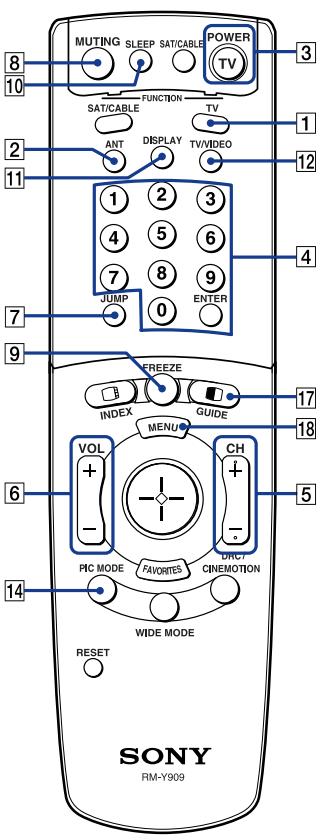
Panneau interne

	Touche	*Description*
1	SYSTEM OFF	Appuyer pour mettre hors tension le téléviseur de projection et tous les appareils raccordés avec S-Link.
2	►	Lecture
3	◄◄	Rembobiner
4	REC	Enregistrer
5	■	Arrêt
6	DVD MENU	Afficher le menu DVD.
7	MTS/SAP	Appuyer pour faire défiler les options de son multi-voie du téléviseur (MTS) : Stéréo, Auto SAP, et Mono.
8	CODE SET	Utilisée pour programmer la télécommande afin de faire fonctionner un appareil vidéo d'un autre fabricant que Sony. Pour plus de détails, voir “Programmation de la télécommande” à la page 68.
9	POWER	Appuyer pour mettre sous tension le lecteur DVD/VCR que vous avez programmés sur la télécommande. Pour obtenir des instructions, voir “Programmation de la télécommande” à la page 68.
10	►►	Avance rapide.
11	AV1 AV2 AV3 DVD	Utiliser cet interrupteur pour commander l’équipement vidéo raccordé. Il est possible de programmer un appareil vidéo pour chaque position de l’interrupteur. Pour plus de détails, voir “Programmation de la télécommande” à la page 68.
12	❚❚	Pause. (Appuyer de nouveau pour retourner en mode normal de lecture)
13	MENU	Affiche le menu d’un appareil vidéo.
14	↑, ↓, ←, →, et ENTER	Utiliser ces touches pour exploiter le menu DVD.
15	♪	Appuyer pour sélectionner une option audio : Volume Auto OUI ou NON.

Regarder la télévision

Nombre de fonctions de télévision peuvent être directement atteintes depuis la télécommande. Vous trouverez ci-dessous des explications sur certaines des touches de votre télécommande.

Touches pour le fonctionnement du téléviseur de projection



1 TV (FUNCTION)

Active la télécommande pour l'utilisation avec le téléviseur de projection.

2 ANT— (entrée AUX)

Appuyer pour passer de l'entrée VHF/UHF à l'entrée AUX.

3 TV (POWER)

Allume et éteint le téléviseur de projection. Si une indication d'entrée vidéo (comme VIDEO 1, VIDEO 2) apparaît à l'écran, appuyer sur TV/VIDEO ou CH+/– jusqu'à ce qu'un numéro de canal apparaisse.

4 0-9 et ENTER

Utilisé pour la sélection des canaux. Appuyer sur les touches 0-9 pour sélectionner un canal (ainsi, pour sélectionner le canal 10, appuyer sur 1 puis sur 0). Le canal change au bout de 2 secondes, ou une fois que vous avez appuyé sur ENTER pour une sélection immédiate.

5 CH +/–

Appuyer sur cette touche pour parcourir les canaux (+ vers le haut ou – vers le bas).

6 VOL +/–

Appuyer sur cette touche pour ajuster le volume (+ vers le haut ou – vers le bas).

7 JUMP

Appuyer sur cette touche pour changer de canal ou pour passer de l'un à l'autre. Le téléviseur de projection passe du canal courant au dernier canal sélectionné.

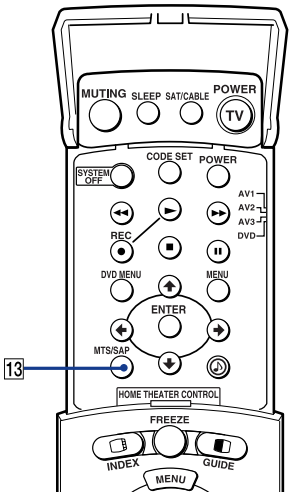
8 MUTING

Appuyer sur cette touche pour couper le son. "MUTING" s'affiche sur l'écran et s'estompe au bout de trois secondes. Pour rétablir le son, appuyer à nouveau sur cette touche ou sur VOL +.

9 FREEZE — (touche à étiquette jaune)

Cette touche s'avère utile lorsque vous voulez copier des informations affichées à l'écran. (voir "Utilisation de la fonction Freeze" à la page 44)

(Suite)



10 SLEEP

Appuyer plusieurs fois sur cette touche jusqu'à ce que le téléviseur de projection affiche le temps moyen en minutes (15, 30, 45, 60 ou 90) au bout duquel le téléviseur de projection s'éteindra automatiquement.

Annuler en appuyant sur SLEEP jusqu'à ce que SLEEP OFF apparaisse ou en mettant l'appareil hors tension.

11 DISPLAY

Appuyer sur cette touche pour afficher le numéro du canal, l'heure actuelle et la légende du canal (le cas échéant).

Pour désactiver l'affichage, appuyer à nouveau sur DISPLAY.

12 TV/VIDEO

Appuyer plusieurs fois pour faire défiler les différentes entrées vidéos : TV, VIDEO 1, VIDEO 2, VIDEO 3, VIDEO 4, VIDEO 5, VIDEO 6 et VIDEO 7.

Si vous sélectionnez Sauter comme Etiquette Vidéo dans le menu Réglage, votre téléviseur de projection ignorera l'entrée vidéo que vous avez sélectionnée. (voir "Etiquette Vidéo" à la page 61)

13 MTS/SAP

Appuyer sur cette touche pour naviguer parmi les options TV Sound (MTS). (voir "MTS" à la page 53)

14 PIC MODE

Appuyer plusieurs fois sur PIC MODE pour choisir directement un des quatre modes vidéo qui convient le mieux au programme que vous regardez.

Vivid : sélectionner cette option pour un contraste et une netteté améliorés pour l'image.

Standard : sélectionner cette option pour afficher une image standard pour les environnements d'affichage normal.

Movie : sélectionner cette option pour afficher une image très détaillée pour les environnements avec peu de lumière.

Pro (Professional) : sélectionner cette option pour afficher une image avec des améliorations minimales.

Lorsque vous sélectionnez chaque mode, vous pouvez également ajuster la qualité de l'image (comme Luminosité, Couleur, etc.) selon vos goûts. Pour en savoir plus, voir "Mode" à la page 50.

Regarder la télévision numérique

Une fois que vous avez connecté le récepteur DTV, vous pouvez regarder les programmes de télévision numérique. Ce téléviseur de projection est capable de recevoir les formats de télévision numérique 1080i, 720p, 480p et 480i.

✍ Ce téléviseur de projection ne peut pas afficher de signal au format 720p. Lorsque le signal de format 720p est reçu, il est converti en signal de format 480p.

Pour voir un programme de télévision numérique

1. Raccorder le récepteur DTV à VIDEO 5, 6 ou 7 IN sur le téléviseur de projection. (Pour plus de détails, voir page 28.)
2. Appuyer sur TV/VIDEO pour sélectionner VIDEO 5 ou 6.
3. Sélectionner un canal numérique sur le récepteur DTV. Pour en savoir plus, reportez-vous aux instructions d'utilisation du récepteur DTV.
4. Ajuster le volume de ce téléviseur de projection, le cas échéant.

Utilisation de la fonction Canaux Préférés

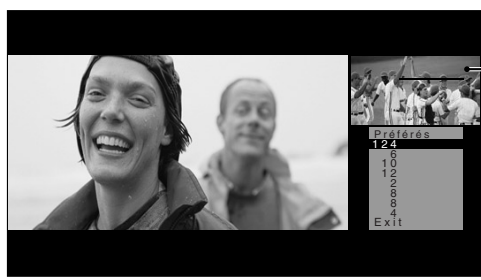
La fonction Canaux préférés permet de choisir des émissions parmi la liste de canaux présélectionnés.

Pour afficher la liste des canaux préférés :

✍ Vos options Canaux Préférés peuvent être réglées automatiquement ou manuellement. Le réglage par défaut de Canaux Préférés est AUTO. Lorsque Canaux Préférés est réglé sur AUTO, les huit derniers canaux sélectionnés à l'aide des touches 0-9 seront réglés comme options Canaux Préférés. Si vous souhaitez régler manuellement les canaux correspondant à vos réglages, voir "Canal Préféré" à la page 54.

1 Appuyer sur FAVORITES.

Les options de la fonction Canaux préférés apparaissent à l'écran.



2 Déplacer la manette vers le haut ou vers le bas pour surligner le canal recherché. L'émission présentée sur ce canal apparaîtra dans la fenêtre d'aperçu. Appuyer sur ⊕ pour sélectionner.

Utilisation de la fonction Twin View™

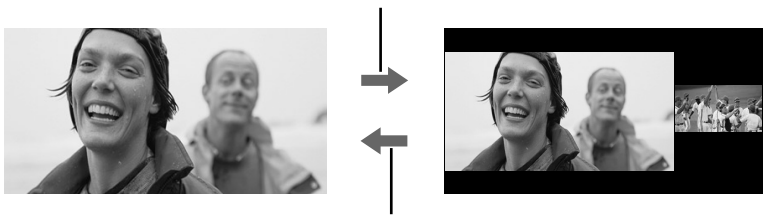
La fonction Twin View permet de voir deux émissions en même temps. Il est aussi possible de changer la taille de l'une ou l'autre image.

Conment activer des deux images

Pour afficher les deux images

1 S'assurer que le téléviseur de projection syntonise un canal en cours de programmation.

2 Appuyer sur ◑.



Pour annuler la deuxième image

❑ Appuyer de nouveau sur ◑ (ou appuyer sur ⊕).

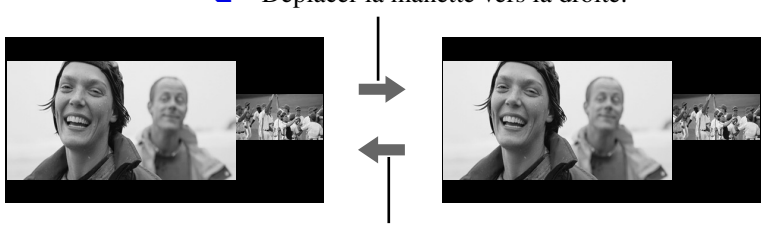
Conment activer l'image

Bien que deux images apparaissent en même temps à l'écran, une seule image est active. Lorsqu'une image est active, il est possible de :

- ❑ changer de canal.
- ❑ régler le volume.
- ❑ passer des entrées VHF/UHF au câble en appuyant sur ANT ou TV/VIDEO pour passer à l'entrée vidéo.
  Lorsque l'image de droite est activée, les sources d'entrée ne peuvent pas être commutées vers VIDEO 5, 6, 7 ni AUX en appuyant sur ANT.
- ❑ changer la taille de l'image en déplaçant la manette vers le haut ou vers le bas.

Pour activer l'image de droite

❑ Déplacer la manette vers la droite.



Pour activer l'image de gauche

❑ Déplacer la manette vers la gauche.

(Suite)

✍ Raccordements qui affectent l'utilisation de la fonction Twin View :

- Si les canaux sont captés à partir d'un décodeur, la fonction Twin View ne pourra pas être utilisée. Le décodeur ne reçoit qu'un seul signal non brouillé à la fois. De ce fait, l'image de droite et celle de gauche seront identiques.
- Vous pouvez cependant regarder une chaîne du câble provenant du décodeur et une autre source vidéo simulatnément. S'assurer que le lecteur DVD, le magnétoscope ou le récepteur satellite sont raccordés aux entrées VIDEO IN 1-7 et AUX à l'arrière du téléviseur de projection. Les images provenant d'appareils raccordés aux prises VIDEO 5, 6, 7 et AUX apparaîtront seulement sur l'image de gauche, pas sur celle de droite.

✍ L'image active est surlignée en bleu.

Comment changer la taille de l'image

La fonction zoom permet de changer la taille des deux images.

Pour agrandir l'image de gauche (réduire celle de droite) :

1. Déplacer la manette vers la gauche pour activer l'image de gauche (si elle n'est pas déjà active).
2. Déplacer la manette vers le haut pour agrandir l'image et déplacer la manette vers le bas pour réduire l'image.

Pour agrandir l'image de droite (réduire celle de gauche) :

1. Déplacer la manette vers la droite pour activer l'image de droite (si elle n'est pas déjà active).
2. Déplacer la manette vers le haut pour agrandir l'image et déplacer la manette vers le bas pour réduire l'image.

✍ Le téléviseur de projection garde en mémoire le réglage de la taille des deux images. Lorsque la fonction Twin View sera réutilisée, les images prendront la taille mémorisée.

Utilisation de la fonction Freeze

La touche FREEZE permet de capturer temporairement une image dans une émission. Cette fonction peut aussi être utilisée pour transcrire des informations apparaissant à l'écran (numéros de téléphone, des recettes, etc).

Pour utiliser la fonction Freeze

1 Lorsque l'information à capturer est affichée, appuyer sur FREEZE.

2 Le téléviseur de projection passe en mode Twin View et affiche l'image à droite de l'écran pendant que l'émission continue d'apparaître à gauche.

3 Pour annuler la fonction et retourner au visionnement normal, appuyer sur FREEZE.

✍ La fonction Freeze n'est pas disponible si vous êtes déjà en mode Twin Wiew™ ou Index.

Utilisation de l'Index de défilement des chaînes

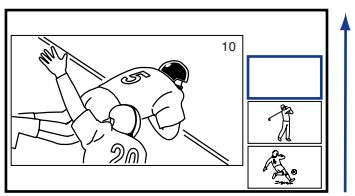
L'index de défilement des chaînes permet de visualiser et de sélectionner une des chaînes reçues défilant à l'écran, sans quitter la chaîne en cours.

✍ L'index de défilement des chaînes ne fonctionne pas lorsque le blocage parental est activé.

Pour utiliser la fonction Index de défilement des chaînes

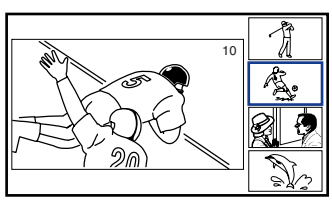
1 Appuyer sur ▢.

La chaîne en cours est réduite et affichée à gauche en format film normal. La première chaîne est affichée brièvement en bas à droite de l'écran puis figée. Il remonte et la chaîne suivante apparaît à son tour en bas à droite. Ce processus est répété avec les autres chaînes.



2 Déplacer la manette vers le haut et le bas de sorte que la chaîne que vous souhaitez visualiser s'affiche dans le cadre de couleur cyan, puis appuyez sur ⊕.

Déplacer de nouveau la manette vers le haut et le bas pour revenir au défilement.

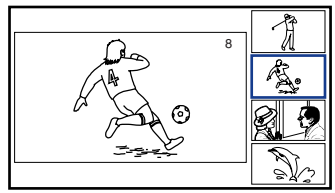


Déplacer une fois la manette vers le haut ou le bas pour changer le sens de défilement.
Déplacer la manette vers le haut ou le bas pour accélérer le défilement.

(Suite)

3 Appuyer de nouveau sur ⊕ pour agrandir le canal sélectionné dans le cadre gauche.

La chaîne sélectionnée est affichée en film normal et le son bascule également sur cette chaîne.



4 Appuyer sur ▢.

La chaîne sélectionnée est agrandie pour une visualisation normale.

Pour annuler la fonction Index de défilement des chaînes

Appuyer de nouveau sur ▢ pour reprendre la visualisation normale.

- ✍ Le son que l'on entend est celui de l'image centrale.
- ✍ Si l'une des images reçues via l'Index de défilement des chaînes est neigeuse, l'ensemble de l'écran peut devenir instable. Dans ce cas, supprimez la chaîne qui a une image neigeuse. (voir "Saute/Ajoute Canal" à la page 55)
- ✍ Si vous laissez l'Index de défilement des chaînes affiché pendant une heure sans effectuer aucune opération, l'Index est annulé et l'image normale réapparaît.
- ✍ L'Index de défilement des chaînes ne peut pas être utilisé en combinaison avec un décodeur numérique, un récepteur DBS ou un boîtier de câblodistribution.
- ✍ La fonction d'Index de défilement ne fonctionne pas si vous utilisez un boîtier de câblodistribution pour visualiser toutes les chaînes.
- ✍ Les sources connectées aux entrées AUX, VIDEO 5, VIDEO 6 et VIDEO 7 s'affichent dans la fenêtre de gauche, mais pas dans celle de droite.
- ✍ L'Index de défilement n'affiche pas les chaînes bloquées par les réglages de contrôle parental (page 60).

Utilisation du mode cinéma

Le mode cinéma permet de visualiser des émissions 4:3 standard en plusieurs modes grand écran (rapport d'aspect 16:9).

Vous pouvez également accéder aux réglages du mode cinéma dans le menu Wide. Pour plus de détails, reportez-vous à la page 56.

❑ Appuyer plusieurs fois sur WIDE MODE pour faire défiler les réglages du mode Wide suivant.

Wide Zoom

Wide Zoom agrandit l'image 4:3, tandis que les parties inférieure et supérieure de l'image sont compressées pour s'adapter à l'écran 16:9.

Normal

Le mode Normal restitue l'image 4:3 à sa taille initiale.

Full

Le mode Plein écran étend l'image 4:3 sur le plan horizontal uniquement, afin de remplir l'écran 16:9.

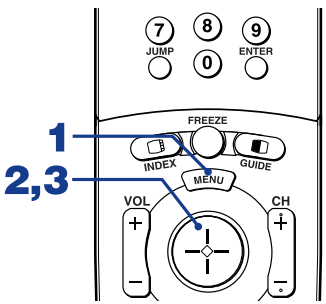
Zoom

Le mode Zoom agrandit l'image 4:3 horizontalement et verticalement, pour atteindre un rapport d'aspect égal, remplissant l'écran 16:9. Utile pour regarder des films au format Letterbox.

Lorsque vous changez de chaîne ou d'entrée, les réglages du mode cinéma reviennent en mode Wide Zoom (ou au réglage par 4:3 défaut dans le menu Wide). Pour conserver le réglage en cours du mode Wide lorsque vous changez de chaîne ou d'entrée, régler 4:3 défaut sur NON. Pour plus de détails, reportez-vous à la page 57.

Utilisation des menus

Aperçu



Ouverture et fermeture d'un menu :

1. Appuyer sur MENU pour afficher l'écran Menu.
2. Déplacer la manette vers l'icône du menu choisi et appuyer sur ⊕ pour le sélectionner.
3. Utiliser la manette pour passer en revue les fonctions.
4. Accéder à la page d'un menu précis pour les instructions de déplacement dans ce menu.

Le menu vous permet d'accéder aux fonctions suivantes :

Icône de menu	*Description*	*Page*
Vidéo	Permet d'ajuster les réglages de l'image. Permet aussi de personnaliser le mode Image selon le type d'émission visionnée.	49
Audio	Offre des options avancées pour la trame sonore tel que la possibilité d'entendre une seconde trame sonore (SAP) ou de personnaliser les effets sonores du téléviseur de projection.	51
Canal	Permet entre autres de faire une liste Canaux Préférés et de lancer l'Auto programmation.	53
Wide	Permet de régler le mode cinéma, le centrage vertical en mode cinéma et le mode 4:3 défaut.	55
Heure	À l'aide de Minuterie, cette fonction permet de régler l'horloge du téléviseur de projection afin de programmer des émissions pour un visionnement ultérieur.	57
Réglage	Offre plusieurs options pour le réglage des canaux, l'identification des entrées vidéo et le choix de la langue des menus affichés.	58

Pour terminer une session du menu :

Appuyer de nouveau sur MENU.

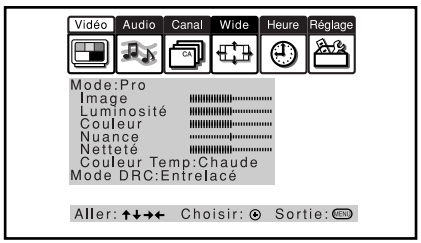
Pour terminer une session dans un menu et passer à un autre :

Appuyer la manette vers le ← pour retourner aux icônes du menu. Déplacer la manette vers le ← ou → pour choisir l'icône du menu suivant et appuyer sur ⊕ pour le sélectionner.

Utilisation du menu Vidéo

Pour sélectionner le menu Vidéo

1. Appuyer sur MENU.
2. Déplacer la manette vers l'icône Vidéo et appuyer sur ⊕.
3. Utiliser la manette pour passer en revue les différentes fonctions.
4. Appuyer sur ⊕ pour sélectionner une fonction. Le réglage de cette fonction apparaîtra.
5. Utiliser la manette pour faire les réglages souhaités.
6. Appuyer sur ⊕ pour sélectionner et faire les réglages.
7. Appuyer sur MENU pour quitter l'écran du menu.



Pour réinitialiser les réglages de l'image, de la luminosité, de la couleur, de la nuance, de la netteté et de la température de la couleur, à leurs valeurs par défaut :

❑ Appuyer sur RESET de la télécommande lorsque le menu Vidéo est affiché.

Sélection des options vidéo

Vous pouvez utiliser PIC MODE de la télécommande comme raccourci permettant de sélectionner les modes vidéo.

Le menu Vidéo contient les options suivantes :

Option	*Description*	
Mode *Affichage personnalisé de l'image*	Éclatant	Pour obtenir un contraste et une précision accrus de l'image.
	Standard	Recommandé lors d'un visionnement normal.
	Film	Sélectionner pour une image douce, comme au cinéma.
	Pro	Sélectionner pour une image d'apparence professionnelle.
	✍ Vous pouvez modifier les réglages du menu Vidéo (Image, Luminosité, Couleur, etc.) pour chaque mode.	
Image	Ajuster pour augmenter le contraste de l'image et foncer la couleur, ou diminuer le contraste et adoucir la couleur.	
Luminosité	Ajuster pour assombrir ou éclaircir l'image.	
Couleur	Ajuster pour augmenter ou diminuer l'intensité de la couleur.	
Nuance	Ajuster pour augmenter ou diminuer les tons de vert.	
Netteté	Ajuster pour rendre l'image plus nette ou plus douce.	

(Suite)

Option	Description	
Couleur Temp. *Adjustement de l'intensite du blanc*	Choisir à partir de trois teintes différentes :	
	Froide	Choisir pour donner au blanc une teinte bleue.
	Neutre	Choisir pour donner au blanc une teinte neutre.
	Chaude	Choisir pour donner au blanc une teinte rouge (Standard-NTSC).
Mode DRC *Digital Reality Creation*	Crée une image de haute résolution à densité quadruplée pour les images provenant de source de haute qualité tels un lecteur DVD, récepteur satellite.	
	Entrelacé	Recommandé pour les images mobiles.
	Progressif	Recommandé pour les images fixes et les textes.
	CineMotion	Recommandé pour les films à 24 expositions.

Utilisation du menu Audio

Pour sélectionner le menu Audio

1. Appuyer sur MENU.
2. Déplacer la manette vers l'icône Audio et appuyer sur ⊕.
3. Utiliser la manette pour passer en revue les différentes options.
4. Appuyer sur ⊕ pour sélectionner une option. Les réglages de cette option apparaissent.
5. Utiliser la manette pour passer en revue les différents réglages.
6. Appuyer sur ⊕ pour sélectionner le réglage souhaité.
7. Appuyer sur MENU pour quitter l'écran du menu.

Pour retourner aux réglages initiaux du fabricant pour les options Aigu, Grave et Balance :

❑ Appuyer sur RESET de la télécommande lorsque le menu Audio est affiché.

Sélection des options audio

Le menu Audio contient les options suivantes :

Option	Description	
Aigu	Ajuster pour augmenter ou diminuer le niveau des sons aigus.	
Grave	Ajuster pour augmenter ou diminuer le niveau des sons graves.	
Balance	Ajuster pour accentuer la balance du haut-parleur de droite ou de gauche.	
Volume Auto	OUI	Sélectionner pour stabiliser le volume.
	NON	Sélectionner pour désactiver l'option Volume Auto.
Effet	TruSurround	Sélectionnez ce réglage pour obtenir un son ambiophonique (programmes stéréo uniquement).
	Simulé	Ajoute un effet ambiophonique aux émissions monophoniques.
	NON	Réception mono ou normale stéréo.

(Suite)

Option	Description	
MTS *Pour profiter des émissions stéréo, mono et bilingues*	Stéréo	Choisir pour une réception en stéréo d'émissions diffusées en stéréo.
	Auto-SAP	Choisir pour que le téléviseur de projection passe automatiquement à la seconde trame sonore s'il reçoit le signal. (En l'absence de signal SAP, le téléviseur de projection reste en mode stéréo.)
	Mono	Choisir pour une réception mono. (Utiliser cette fonction pour réduire les parasites lorsque le signal de télédiffusion stéréo est faible.)
Haut-Parleur	OUI	Choisir pour activer les haut-parleurs du téléviseur de projection.
	NON	Choisir pour désactiver les haut-parleurs du téléviseur de projection. La trame sonore du téléviseur de projection provient alors des haut-parleurs du système audio externe.
Sortie Audio *Pour faciliter les réglages du volume*	Variée	Les haut-parleurs du téléviseur de projection sont éteints mais le volume provenant de votre système audio peut être contrôlé par la télécommande du téléviseur de projection.
	Fixe	Les haut-parleurs du téléviseur de projection sont éteints et la sortie du volume, des basses et des aigus du téléviseur de projection est fixe. Utiliser le bouton de volume de votre récepteur audio pour régler le volume de tout votre système audio.

Utilisation du menu Canal

Pour sélectionner le menu Canal

1. Appuyer sur MENU.
2. Déplacer la manette vers l'icône Canal et appuyer sur ⊕.
3. Utiliser la manette pour passer en revue les différentes options.
4. Appuyer sur ⊕ pour sélectionner une fonction. Les réglages de cette fonction apparaîtront.
5. Utiliser la manette pour passer en revue les différentes options.
6. Appuyer sur ⊕ pour sélectionner l'option souhaitée.
7. Appuyer sur MENU pour quitter l'écran du menu.

Sélection des options de canal

Le menu Canal contient les options suivantes :

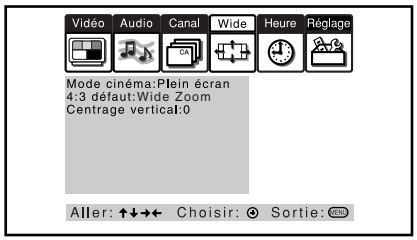
Option		Description
Canal Préféré	Auto	Sélectionner si vous souhaitez un réglage automatique des options de canaux préférés sur les huit derniers canaux sélectionnés à l'aide des touches 0 à 9.
	Manual	Sélectionner si vous souhaitez faire vos propres sélections dans les options de canaux préférés. 1 Appuyer sur ⊕ pour sélectionner le numéro du canal préféré. 2 Utiliser la manette pour passer en revue les différents canaux et choisir celui à ajouter à la liste des préférés. 3 Appuyer sur ⊕ pour le sélectionner
Câble	OUI	Sélectionner si la réception des canaux câblé est faite à l'aide d'un câble CATV.
	NON	Sélectionner si une antenne est utilisée.
	✍ Après une modification des réglages de l'option Câble, lancer la fonction Auto programmation.	

(Suite)

Option	Description	
Canal fixe *Cette option est très utile s'il y a raccordement d'un décodeur ou d'un récepteur satellite*	2-6	"Fixer" le réglage du téléviseur de projection sur le canal 3 ou 4 et utiliser le décodeur, le magnétoscope ou le récepteur satellite pour changer de canal. Sélectionner un de ces réglages si un appareil est raccordé à la prise UHF/VHF.
	AUX 2-6	Faire comme pour les canaux 2-6 mais sélectionner un de ces réglages si un appareil est raccordé à la prise AUX. (voir page 15)
	VIDEO 1	Utilisez ce réglage lors du branchement d'un boîtier de raccordement pour commander les sources vidéo externes. La sortie du téléviseur doit être raccordée via le boîtier de raccordement.
Auto Programmation	Programme automatiquement le téléviseur de projection pour recevoir tous les canaux disponibles.	
Saute/Ajoute Canal	Supprime et ajoute des canaux visibles. **1** Utiliser la manette pour passer en revue les canaux jusqu'au canal à sauter ou à ajouter. **2** Appuyer sur ⊕ pour le sélectionner. **3** Appuyer sur la manette vers le haut ou vers le bas pour "ajouter" ou "sauter". **4** Appuyer sur ⊕ pour sélectionner.	
Etiquette de canal	Identifie un maximum de 20 canaux par leur sigle.	

Utilisation du menu Wide

Pour sélectionner le menu Wide



1. Appuyer sur MENU.
2. Utiliser la manette pour passer sur l'icône Wide et appuyer sur .
3. Déplacer la manette pour faire défiler les fonctions.
4. Appuyer sur pour sélectionner une fonction.

   Les options de cette fonction apparaissent.
5. Utiliser la manette pour faire défiler les options.
6. Appuyer sur pour sélectionner l'option souhaitée.
7. Appuyer sur MENU pour quitter l'écran du menu.

Sélection des options du menu Wide

Pour passer d'un mode cinéma à un autre, utiliser la touche WIDE MODE de la télécommande.

Le mode Wide n'est pas disponible en mode Twin View, Index ou Freeze.

4:3 Default (par défaut) fonctionne uniquement lorsque le téléviseur de projection reçoit des signaux 480i.

Le menu Wide contient les options suivantes :

Option	Description	
Mode cinéma *Sélectionner un mode cinéma à utiliser pour les sources 4:3.*	Wide Zoom	Permet d'agrandir l'image 4:3, tandis que les parties inférieure et supérieure de l'image sont compressées pour s'adapter à l'écran 16:9.
	Normal	Permet de rétablir l'image 4:3 en mode normal.
	Plein écran	Permet d'agrandir l'image 4:3 sur le plan horizontal uniquement, afin de remplir le format grand écran.
	Zoom	Permet d'agrandir l'image 4:3 horizontalement et verticalement, pour atteindre un rapport d'aspect égal, remplissant le grand écran.

(Suite)

Si 4:3 défaut est réglé sur une autre position que NON, le réglage du mode cinéma change uniquement pour la chaîne en cours. Lorsque vous changez de chaîne (ou d'entrée), le mode cinéma est automatiquement remplacé par le réglage 4:3 défaut. Pour conserver le réglage en cours du mode cinéma lorsque vous changez de chaîne ou d'entrée, régler 4:3 défaut sur NON.

Option	*Description*	
4:3 défaut *Sélectionner le mode d'écran par défaut pour utiliser les sources 4:3.*	Wide Zoom	Permet d'agrandir l'image 4:3, tandis que les parties inférieure et supérieure de l'image sont compressées pour s'adapter à l'écran 16:9.
	Normal	Permet de rétablir l'image 4:3 en mode normal.
	Plein écran	Permet d'agrandir l'image 4:3 sur le plan horizontal uniquement, afin de remplir le format grand écran.
	Zoom	Permet d'agrandir l'image 4:3 horizontalement et verticalement, pour atteindre un rapport d'aspect égal, remplissant le grand écran.
	NON	Permet de continuer à utiliser le réglage du mode Wide en cours lorsque vous changez de chaîne ou d'entrée.
Centrage vertical	Vous permet de déplacer l'image de haut en bas dans la fenêtre. (Disponible uniquement en modes Wide Zoom et Zoom.) Déplacer la manette vers le haut ou vers le bas pour choisir une position, puis appuyer sur ⊕.	

✍ Certains programmes au format grand écran (particulièrement certains films conçus pour les salles de cinéma) s'affichent dans un format nécessitant l'affichage de bandes noires en haut et en bas de votre écran 16:9. Pour plus de détails, reportez-vous aux documents fournis avec votre DVD ou contactez votre fournisseur de contenu.

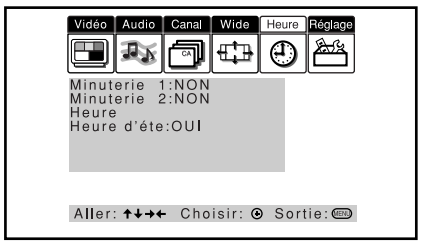
Heure

Utilisation du menu Heure

Pour sélectionner le menu Heure

1 Appuyer sur MENU.

2 Utiliser la manette pour déplacer le curseur sur l'icône Heure et appuyer sur ⊕.



Pour régler l'heure

1 Utiliser la manette pour sélectionner "Heure" et appuyer sur ⊕.

2 Si la saison courante correspond à l'heure d'été, régler d'abord le mode Heure d'été sur "OUI".

3 Utiliser la manette pour entrer l'heure exacte puis appuyer sur ⊕.

4 Appuyer sur MENU pour quitter l'écran du menu.

Pour régler la minuterie

Avant de régler la minuterie, régler correctement l'heure et le mode (heure normale/heure d'été) de l'horloge du téléviseur de projection.

1 Déplacer la manette vers "Minuterie 1" ou "Minuterie 2" et appuyer sur ⊕.

2 Utilisez la manette pour saisir le jour, l'heure, la chaîne et la durée de minuterie souhaités, en appuyant ensuite sur ⊕ pour enregistrer chaque valeur saisie.

3 Appuyer sur MENU pour quitter l'écran du menu.

Pour réinitialiser l'horloge et les minuteries

❑ Appuyer sur RESET de la télécommande après avoir sélectionné cette option dans le menu Heure.

Sélection des options du menu Heure

Le menu Heure contient les options suivantes :

Option	*Description*	
Minuterie 1 Minuterie 2	Programmer	Choisir pour le réglage de la Minuterie selon le jour, l'heure, la durée et le canal.
	NON	Choisir pour désactiver la Minuterie. (Les réglages précédents seront sauvegardés.)
Heure	Régler l'heure.	
Heure d'été	OUI	Choisir au printemps pour ajuster l'heure pendant la période d'heure d'été.
	NON	Choisir en automne pour ajuster l'heure à la fin de la période d'heure d'été.

Utilisation du menu Réglage

Pour sélectionner le menu Réglage

1. Appuyer sur MENU.
2. Utiliser la manette pour aller à l'icône Réglage et appuyer sur .
3. Utiliser la manette pour passer en revue les différentes fonctions.
4. Appuyer sur pour sélectionner une fonction. Les réglages de cette fonction apparaissent.
5. Utiliser la manette pour passer en revue les différentes options.
6. Appuyer sur pour sélectionner l'option souhaitée.
7. Appuyer sur MENU pour quitter l'écran du menu.

Sélection des options du menu Réglage

Le menu Réglage contient les options suivantes:

Option	*Description*	
Contrôle Parental	Permet de configurer le téléviseur afin de verrouiller des programmes en fonction de leur contenu et leur classement. Pour plus de détails sur la configuration, reportez-vous à "Utilisation du menu Parent" à la page 60.	
Caption Vision *(Sous-titres)*	Choix parmi trois modes de sous-titrage (pour les émissions diffusées avec sous-titres).	
	NON	Désactive l'option Caption Vision.
	CC1, CC2, CC3, CC4	Affiche une version écrite du dialogue ou des effets sonores d'une émission. (Régler à CC1 pour la plupart des émissions.)
	TEXT1, TEXT2, TEXT3, TEXT4	Identification du réseau ou de la station affichée sur la moitié ou la totalité de l'écran (si offert). Régler à CC1 pour l'affichage des sous-titres.
	XDS *(Service info des programmes)*	Affiche l'identification du canal, le titre de l'émission, la durée de l'émission et l'heure de diffusion si le diffuseur offre ce service.

Option	Description	
Etiquette Vidéo	Cette fonction permet d'identifier les appareils audio/vidéo raccordés au téléviseur de projection afin de pouvoir les repérer plus facilement à l'aide de TV/VIDEO. Dans le menu Réglage de la fonction Étiquette vidéo, utiliser la manette pour surligner une étiquette, puis appuyer sur ⊕ pour la sélectionner. Utiliser la manette pour faire défiler les étiquettes. Appuyer sur ⊕ pour sélectionner l'appareil raccordé à chaque prise d'entrée située à l'arrière du téléviseur de projection. Sélectionner "Sauter" si aucun appareil n'est raccordé à cet ensemble de prises d'entrée.	
	VIDEO 1/2/3/4	VHS, DVD, Récepteur, Satellite, Décodeur câble, 8 mm, Télé numérique, Console de jeu, Disque laser, Internet, Magnétoscope beta, Sauter
	VIDEO 5/6/7	DVD, Satellite, Décodeur câble, Télé numérique, HD, Sauter
	En choisissant "Saute", le téléviseur de projection saute ce raccordement lorsque TV/VIDEO est appuyée.	
	✍ Lorsque vous réglez la fonction Étiquette vidéo sur "Récepteur", l'entrée du téléviseur de projection est sélectionnée.	
Langue	Sélectionner pour afficher tous les écrans des menus dans la langue de votre choix : English, Español, Français.	

Utilisation du menu Parent

Le menu Parent permet de régler le téléviseur de projection afin de bloquer des émissions selon leur contenu ou leur classement.

Ces classements sont attribués par une commission fédérale de classement. Les programmes ne sont pas tous classés. La fonction Blocage parental permet de bloquer les programmes ayant un classement spécifique mais elle ne permet pas de bloquer toute la programmation d'un canal.

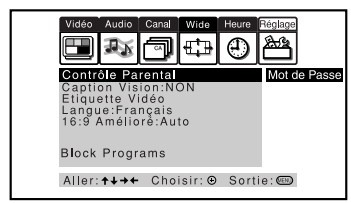
✍ L'index de défilement des chaînes ne fonctionne pas lorsque le blocage parental est activé.

Pour sélectionner le classement

Un mot de passe doit d'abord être défini. Sélectionner ensuite le pays de résidence (États-Unis ou Canada), ainsi que le classement choisi.

1 Appuyer sur MENU.

2 Déplacer la manette vers l'icône Réglage et appuyer sur ⊕.



3 Vérifier que "Contrôle parental" est sélectionné puis appuyer sur ⊕.

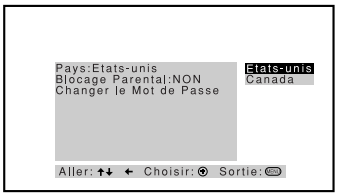
4 Utiliser les touches 0-9 de la télécommande pour entrer les quatre chiffres du mot de passe.

5 Confirmer le mot de passe en le tapant à nouveau. Votre mot de passe est mémorisé et les options du menu Parent apparaissent.

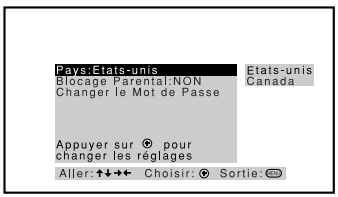
✍ Ce mot de passe sera nécessaire pour accéder au menu Parent. En cas d'oubli du mot de passe, reportez-vous à la section "Oubli du mot de passe" à la page 75.

✍ Si vous souhaitez changer de mot de passe, voir page 62.

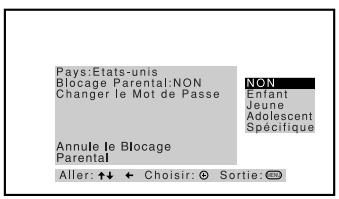
6 Vérifier que “Pays” est sélectionné puis appuyer sur ⊕.



7 Déplacer la manette vers le haut ou vers le bas pour sélectionner le pays dans lequel vous résidez, puis appuyer sur ⊕.

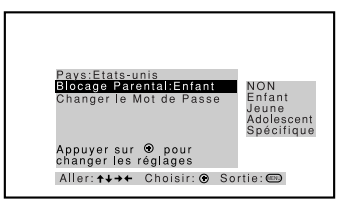


8 Déplacer la manette vers le bas pour sélectionner “Blocage Parental”, puis appuyer sur ⊕.



9 Déplacer la manette vers le haut ou vers le bas pour sélectionner un classement, puis appuyer sur ⊕.

Si vous sélectionnez Enfant, Jeune, Adolescent ou Spécifique, le contrôle parental s’active automatiquement.



Si vous souhaitez sélectionner le classement Spécifique, voir “Utilisation des options de classement Spécifique” à la page 63.

10 Appuyer sur MENU pour quitter l’écran du menu.

(Suite)

Le menu Parent comprend les options suivantes :

Option	*Description*	
Blocage Parental *Active ou désactive le blocage et sélectionne un système de classement*	NON	Le blocage parental est inactif. Aucune émission n'est bloquée.
	Enfant	Classement maximal permis : ❑ U.S.A. : TV-Y, TV-G, G ❑ Canada : TV-Y, C, G
	Jeune	Classement maximal permis : ❑ U.S.A. : TV-PG, PG ❑ Canada : TV-PG, PG, 8 ans+
	Adolescent	Classement maximal permis : ❑ U.S.A. : TV-14, PG-13 ❑ Canada : TV-14, 14 ans+, 13 ans+
	Spécifique	Réglage manuel du classement. ❑ U.S.A. : voir page 66 pour plus de détails. ❑ Canada : voir page 67 pour plus de détails.
Changer le mot de passe	Pour changer le mot de passe. (Voir ci-dessous.)	

Si le système de classement à l'intention des parents ne vous est pas familier, il est recommandé d'utiliser les catégories prédéfinies Enfant, Jeune ou Adolescent afin de simplifier la sélection. Pour un réglage plus restrictif, sélectionner Spécifique.

Pour une description des classements Enfant, Jeune et Adolescent, voir pages 66 et 67.

Pour désactiver la fonction Contrôle parental

❑ Régler Blocage Parental dans le menu Parent sur NON.

Pour changer le mot de passe

1. Sélectionner à l'aide de la manette l'option de Changer mot de passe du menu Parent, puis appuyer sur ⊕.
2. Saisir un nouveau mot de passe à quatre chiffres a l'aide des touches 0 à 9.
3. Confirmer le nouveau mot de passe en le saisissant de nouveau.
4. Appuyer sur MENU pour quitter l'ecran de menu.

Visionnement d'émissions bloquées

Vous pouvez visionner une émission bloquée en saisissant le mot de passe.

1. Appuyer sur ENTER lorsque l'émission diffusée est bloquée.
2. Saisir votre mot de passe à l'aide des touches 0 à 9.

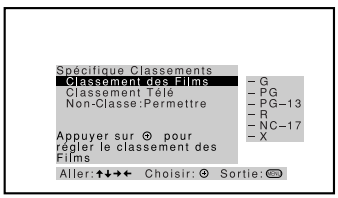
   Le contrôle parental est temporairement désactivé jusqu'a la mise hors tension de votre téléviseur de projection.

Utilisation des options de classement Spécifique

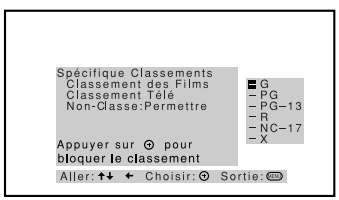
Si vous souhaitez sélectionner les classifications de restriction de visualisation en utilisant le réglage Spécifique, suiver la procédure suivante.

1 Réaliser les opérations 1 à 8 de la section “Pour sélectionner le classement” à la page 60 pour afficher les options du blocage Parental.

2 Déplacer la manette vers le haut ou vers le bas pour sélectionner “Spécifique”, puis appuyer sur ⊕.

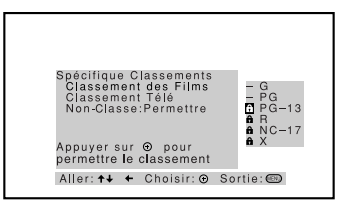


3 Vérifier que “Classement des Films” est sélectionné, puis appuyer sur ⊕.



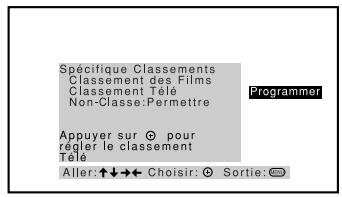
4 Déplacer la manette vers le haut ou vers le bas pour sélectionner le classement à bloquer, puis appuyer sur ⊕.

L’indicateur 🔒 apparaît automatiquement à côté du classement sélectionné et de tous les classements “supérieurs”, indiquant que les programmes possédant un signal de classement correspondant seront bloqués.

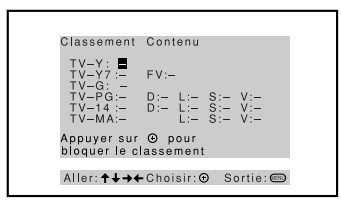


Pour débloquer un classement, le sélecciouner en déplaçant la manette vers le haut ou vers le bas, puis appuyer sur ⊕. L’indicateur 🔒 est remplacé par “-” et tous les autres classements “inferieurs” sont débloqués.

5 Déplacer la manette vers la gauche, puis vers le bas, pour selectionner “Classement Télé” o “Programmer”, puis appuyer sur ⊕.

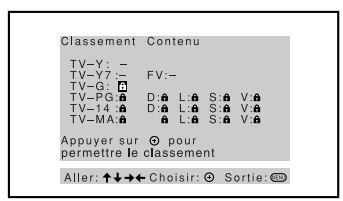


6 Le menu de réglage du “Classement Télé” apparaît.



7 Déplacer la manette vers le haut ou vers le bas pour sélectionner le classement à bloquer, puis appuyer sur ⊕.

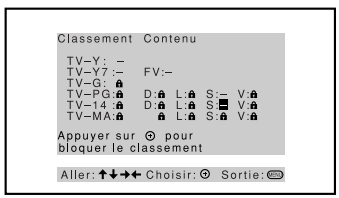
L’indicateur 🔒 apparaît automatiquement à côté du classement sélectionné et de tous les classements “supérieurs”, indiquant que les programmes possédant un signal de classement correspondant seront bloqués.



Pour débloquer un classement, le séleccioner en déplaçant la manette vers le haut ou vers le bas, puis appuyer sur ⊕. L’indicateur 🔒 est remplacé par “-” et tous les autres classements “inférieurs” sont débloqués.

Certains classements des émissions télévisées comportent des classements de contenu complémentaires, appelés “extensions de classement”. Ces extensions de classement sont définies comme suit : D (dialogue à caractère sexuel), FV (violence de nature fantastique), L (langage grossier), S (scènes sexuelles) et V (violence). En réglant ces extensions, vous pouvez définir des restrictions supplémentaires. L’ensemble des extensions comprises dans les classifications sélectionnées seront bloquées. Si vous souhaitez que l’une d’entre elles puisse être regardée, passer à l’étape 8.

8 Déplacer la manette de commande vers la gauche ou vers la droite pour sélectionner l’extension de classification pouvant être regardée et appuyer sur ⊕.



“–” apparaît à côté de l’extension de classification sélectionnée, indiquant que les programmes correspondant à cette extension pourront être regardés.

Si vous appuyez sur ⊕ de nouveau, 🔒 est affiché pour indiquer que les programmes qui correspondent à l’extension seront de nouveau bloqués.

9 Répéter l’étape 8 pour les autres extensions.

Tous les autres programmes qui correspondent aux classements que vous sélectionnez et aux classements supérieurs à l’exception des extensions annulées, seront bloqués.

10 Appuyer sur MENU pour quitter l’écran du menu.

Options de classement spécifique pour États-Unis

Si vous sélectionnez États-unis comme pays de résidence à la page 60, le menu Classement spécifique comprend les options suivantes. (Si vous sélectionnez Canada, voir page 66.)

Option	*Description*	
Classement des films	G	Enfants et tout public.
	PG	Surveillance parentale conseillée.
	PG-13	Surveillance parentale conseillée pour les enfants de moins de 13 ans.
	R	Pour adultes seulement, surveillance parentale pour les enfants de moins de 17 ans.
	NC-17 et X	Interdit aux moins de 17 ans.
Classement des émissions télévisées *blocage des émissions par classement selon l'âge, le contenu ou les deux*	Options basées sur l'âge	
	TV-Y	Tous les enfants.
	TV-Y7	Pour les enfants plus âgés.
	TV-G	Tout public.
	TV-PG	Surveillance parentale conseillée.
	TV-14	Avertissement fait aux parents.
	TV-MA	Pour adultes seulement.
	Options basées sur le contenu	
	FV	Fiction/Violence.
	D	Dialogue suggestif.
	L	Langage grossier.
	S	Scènes sexuelles.
	V	Violence.
Non-Classe *blocage des émissions ou des films diffusés sans classement*	Bloquer	Bloque toutes les émissions ou tous les films diffusés sans classement.
	Permettre	Permet les émissions et les films diffusés sans classement.

Afin d'assurer une capacité maximale de blocage, utiliser les classements basés sur l'âge.

Noter que le blocage de programmes de télé non-classés peut entraîner le blocage des programmes suivants : les télédiffusions d'urgence, les émissions à caractère politique ou sportif, les bulletins de nouvelles, les communiqués provenant des gouvernements, les émissions à caractère religieux ainsi que les bulletins météo.

✍ Le classement basé sur le contenu augmentera selon le classement basé sur l'âge. Par exemple, un émission ayant un classement TV-PG V (Violence) contiendra des scènes de violence modérée alors qu'un classement TV-14 V (Violence) contiendra des scènes de violence plus intense.

Options de classement spécifique pour Canada

Si vous sélectionnez Canada comme pays de résidence à la page 60, le menu Classement spécifique comprend les options suivantes. (Si vous sélectionnez États-Unis, voir page 65.)

Option	Description	
Classement anglais	C	Tous les enfants.
	C8+	Enfant de 8 ans et plus.
	G	Tout public.
	PG	Surveillance parentale.
	14+	Pour les plus de 14 ans.
	18+	Pour les adultes.
Classement français	G	Tout public.
	8 ans+	Ne convient pas aux jeunes enfants.
	13 ans+	Ne convient pas aux enfants de moins de 13 ans.
	16 ans+	Ne convient pas aux enfants de moins de 16 ans.
	18 ans+	Pour adultes seulement.
Classement U.S.A.	Voir “Classement des émissions télévisées” à la page 66 pour en savoir plus.	

Informations complémentaires

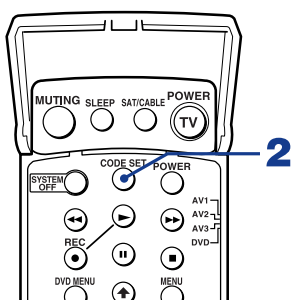
Programmation de la télécommande

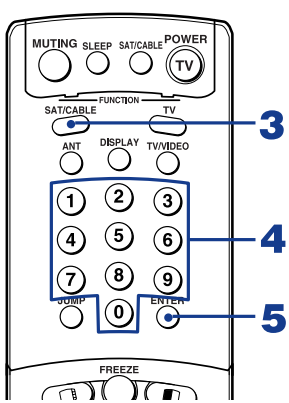
La télécommande est réglée pour faire fonctionner des appareils vidéo de la marque Sony.

Équipement Sony	*Position de l'interrupteur sur la télécommande*	*Code programmable*
Magnétoscopes Beta, ED Beta	AV1	303
Magnétoscope de 8 mm	AV2	302
Magnétoscope VHS	AV3	301
Lecteur DVD	DVD	751

Si l'équipement vidéo que vous souhaitez contrôler à l'aide de la télécommande du téléviseur de projection n'est pas de la marque Sony, utiliser la procédure suivante pour programmer la télécommande.

✍ L'équipement doit être doté d'une capacité de commande à distance par infrarouge pour pouvoir être utilisé avec la télécommande.

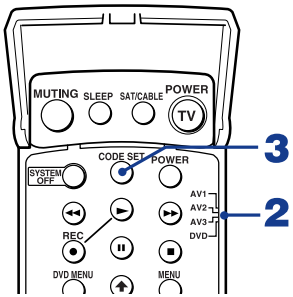


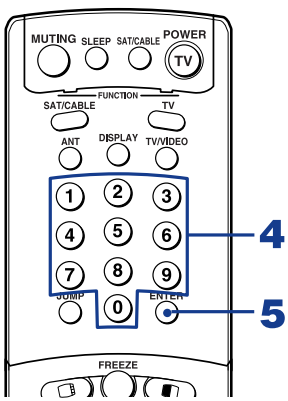


À partir des "Codes fabricant" listés en page 70, sélectionner le code à trois chiffres correspondant à la marque de l'appareil. Si la liste comprend plus d'un code, essayer d'abord le premier code. Utiliser ce code et suivre les procédures suivantes.

Pour programmer un décodeur ou un récepteur satellite

1. Ouvrir le boîtier de la télécommande.
2. Appuyer sur CODE SET du panneau interne.
3. Refermer le boîtier et appuyer sur SAT/CABLE (FUNCTION).
4. Saisisser le code fabricant à trois chiffres à l'aide des touches 0 à 9.
5. Appuyer sur ENTER.
6. Pour vérifier s'il s'agit du bon code, diriger la télécommande du téléviseur de projection vers l'appareil et appuyer sur la touche verte POWER correspondant à cet appareil. Si l'appareil réagit, la programmation est terminée. Sinon, essayer les autres codes de la liste fournie pour cet appareil.





Pour programmer des appareils vidéo

1 Ouvrir le boîtier de la télécommande.

2 Glisser le curseur selon le type d'appareil souhaité.

3 Appuyer sur CODE SET du panneau interne.

> ✍ Vous devrez accomplir l'étape 4 dans les 10 secondes suivant l'étape 3 si vous ne voulez pas devoir reprendre la procédure à l'étape 3.

4 Refermer le boîtier et saisir le code fabricant à trois chiffres à l'aide des touches 0 à 9.

5 Appuyer sur ENTER.

6 Pour vérifier s'il s'agit du bon code, diriger la télécommande du téléviseur de projection vers l'appareil, ouvrer le boîtier, puis appuyer sur la touche verte POWER. Si l'appareil réagit, la programmation est terminée. Sinon, essayer les autres codes de la liste fournie pour cet appareil.

Suggestions

- Si la liste du fabricant comporte plus d'un code, essayer de les entrer un par un jusqu'à l'obtention du bon code pour cet appareil.
- Lorsqu'un nouveau code est entré, le code précédemment entré pour ce réglage sera écrasé.
- En de rares occasions, il est possible qu'aucun code ne permette d'utiliser la télécommande de Sony pour cet appareil. Il faudra alors utiliser la télécommande de l'appareil.

Codes fabricant

Magnétoscopes

Fabricant	*Code*
Sony	301
Admiral (M. Ward)	327
Aiwa	338, 344
Audio Dynamic	314, 337
Broksonic	319, 317
Canon	309, 308
Citizen	332
Craig	302, 332
Criterion	315
Curtis Mathes	304, 338, 309
Daewoo	341, 312, 309
DBX	314, 336, 337
Dimensia	304
Emerson	319, 320, 316, 317, 318, 341
Fisher	330, 335
Funai	338
General Electric	329, 304, 309
Go Video	322, 339, 340
Goldstar	332
Hitachi	306, 304, 305,338
Instant Replay	309, 308
JC Penney	309, 305, 304, 330, 314, 336, 337
JVC	314, 336, 337, 345, 346, 347
Kenwood	314, 336, 332, 337
LXI (Sears)	332, 305, 330, 335, 338
Magnavox	308, 309, 310
Marantz	314, 336, 337
Marta	332
Memorex	309, 335
Minolta	305, 304
Mitsubishi/ MGA	323, 324, 325, 326
Multitech	325, 338, 321
NEC	314, 336, 337
Olympic	309, 308
Optimus	327
Panasonic	308, 309, 306, 307
Pentax	305, 304
Philco	308, 309
Philips	308, 309, 310
Pioneer	308
Quasar	308, 309, 306
RCA/ PROSCAN	304, 305, 308, 309, 311, 312, 313, 310, 329
Realistic	309, 330, 328, 335, 324, 338
Sansui	314
Samsung	322, 313, 321
Sanyo	330, 335
Scott	312, 313, 321, 335, 323, 324, 325, 326
Sharp	327, 328
Shintom	315
Signature 2000 (M. Ward)	338, 327
SV2000	338
Sylvania	308, 309, 338, 310
Symphonic	338
Tashiro	332
Tatung	314, 336, 337
Teac	314. 336, 338, 337
Technics	309, 308
Toshiba	312, 311
Wards	327, 328, 335, 331, 332
Yamaha	314, 330, 336, 337
Zenith	331

Lecteurs DVD

Fabricant	*Code*
Sony	751
Panasonic	753
Pioneer	752
RCA	755
Toshiba	754

Décodeurs

Fabricant	*Code*
Hamlin/Regal	222, 223, 224, 225, 226
Jerrold/G. I.	201, 202, 203, 204, 205, 206, 207, 208, 218
Oak	227, 228, 229
Panasonic	219, 220, 221
Pioneer	214, 215
Scientific Atlanta	209, 210, 211
Tocom	216, 217
Zenith	212, 213

Récepteurs satellite

Fabricant	*Code*
Sony	801
General Electric	802
Hitachi	805
Hughes	804
Panasonic	803
RCA/ PROSCAN	802, 808
Toshiba	806, 807

Fonctionnement des autres appareils à l'aide de la télécommande du téléviseur de projection

Fonctionnement d'un magnétoscope

Oubrir le boîtier puis déplacer le curseur vers l'entrée AV codée pour cet appareil.

Pour...	Appuyer sur
Allumer ou éteindre	Touche POWER verte située à l'intérieur du panneau
Changer de canal	CH +/–
Enregistrer	► et REC simultanément.
Lire	►
Arrêter	■
Avancer rapidement	►►
Rembobiner la cassette	◄◄
Faire une pause	❚❚ (appuyer de nouveau pour repasser en lecture normale)
Chercher une image vers lávant ou vers lárrière	►► ou ◄◄ pendant la lecture (relâchez pour retourner à la lecture normale)
Changer de mode d'entrée	Commutateur

Fonctionnement d'un lecteur DVD

Oubrir le boîtier puis déplacer le curseur vers l'entrée DVD pour cet appareil.

Pour...	Appuyer sur
Allumer ou éteindre	Touche POWER verte située à l'intérieur du panneau
Lire	►
Arrêter	■
Faire une pause	❚❚ (appuyer de nouveau pour repasser en lecture normale)
Passer d'un morceau à un autre d'un disque audio	►► pour avancer ou ◄◄ pour reculer
Passer d'un chapitre à un autre d'un disque vidéo	CH+ pour avancer ou CH- pour reculer
Afficher le menu DVD	DVD MENU
Afficher le menu (réglage)	MENU
Exploiter le menu DVD	↑, ↓, ←, →, ENTER

(Suite)

Fonctionnement d'un décodeur

Pour...	*Appuyer sur*
Allumer ou éteindre	SAT/CABLE (POWER)
Sélectionner le décodeur	SAT/CABLE (FUNCTION)
Sélectionner un canal	Les touches 0-9, sur puis ENTER
Changer de canal	CH +/–
Retourner au canal précédent	JUMP

Fonctionnement d'un récepteur satellite

Pour...	*Appuyer sur*
Allumer ou éteindre	SAT/CABLE (POWER)
Sélectionner le récepteur satellite	SAT/CABLE (FUNCTION)
Sélectionner un canal	Les touches 0-9, sur puis ENTER
Changer de canal	CH +/–
Revenir au canal précédent	JUMP
Afficher le numéro du canal	DISPLAY
Afficher le guide DBS	GUIDE
Afficher le menu DBS	MENU
Déplacer le curseur (surligné)	La manette ou les touches flèchées
Choisir un élément	

Guide de dépannage

Si après avoir lu le présent mode d'emploi vous avez d'autres questions concernant l'utilisation de votre téléviseur de projection Sony, veuillez contacter notre centre d'informations à la clientèle, au 1-800-222-SONY (7669) (résidents américains uniquement) ou au (416) 499-SONY (7669) (résidents canadiens uniquement).

Problème	Solutions envisageables
Aucune image (écran non allumé), pas de son	❑ Vérifiez que le câble d'alimentation du téléviseur de projection est bien connecté à la prise murale. ❑ Appuyez sur le bouton d'alimentation situé à l'avant du téléviseur de projection. ❑ Vérifiez que le réglage TV/VIDEO est correct : lorsque vous regardez la télévision, réglez-le sur TV. Lorsque vous regardez une cassette vidéo, réglez-le sur VIDEO 1, 2, 3, 4, 5, 6 ou 7. ❑ Essayez un autre canal. Le problème peut venir du canal et non du téléviseur de projection. ❑ La fonction Controle parental est activée. (voir "Utilisation du menu Parent" à la page 62) ❑ Si votre téléviseur de projection ne s'allume pas et qu'un voyant lumineux rouge clignote, vous devrez faire réparer votre poste. Contactez votre centre d'assistance Sony local.
La télécommande ne fonctionne pas	❑ Les piles sont peut être épuisées. Remplacez-les. ❑ Appuyer sur TV (FUNCTION) lorsque vous utilisez votre téléviseur de projection. ❑ Vérifiez que le câble d'alimentation du téléviseur de projection est bien connecté à la prise murale. ❑ Placez le téléviseur de projection à 1 mètre au moins de sources de lumière fluorescente. ❑ Vérifiez la polarité des piles.
Image sombre, brouillée ou aucune image (écran allumé), son satisfaisant	❑ Réglez l'option Image du menu Video. (voir page 50) ❑ Réglez l'option Luminosité du menu Video. (voir page 50) ❑ Vérifiez les branchements de l'antenne ou du câble. ❑ Reglez de nouveau la convergence à l'aide de la touche FLASH FOCUS. (voir "Ajustement automatique de la convergence —FLASH FOCUS™—" à la page 33)
Bonne image, pas de son	❑ Appuyez sur MUTING afin que la mention "MUTING" disparaisse de l'écran. (voir page 34) ❑ Vérifiez que l'option Haut-Parleur est bien réglée sur OUI dans le menu Audio. (voir page 53) ❑ Vérifiez le réglage MTS du menu Audio. (voir "MTS" à la page 53)
Réception de canaux numériques impossible (lorsqu'un récepteur DTV est connecté)	❑ Vérifiez les raccordements entre le récepteur DTV et le téléviseur de projection. (voir page 28) ❑ Vérifiez si vous pouvez recevoir des programmes numériques dans votre region.

(Suite)

Problème	*Solutions envisageables*
Réception des canaux supérieurs (UHF) impossible lors de l'utilisation d'une antenne	❑ Réglez l'option Câble sur NON. (voir page 54) ❑ Utilisez l'option Auto Programmation du menu Canal pour ajouter des chaînes pouvant être captées et ne figurant pas encore dans la mémoire de votre téléviseur de projection. (voir page 55)
Pas de couleur	❑ Réglez l'option Couleur du menu Vidéo. (voir page 50)
Seuls des parasites sonores et visuels apparaissent à l'écran.	❑ Vérifiez le réglage Cable du menu Canal. ❑ Vérifiez les connexions de l'antenne ou du câble. ❑ Vérifiez que le canal diffuse des programmes. ❑ Appuyez sur ANT pour modifier le mode d'entrée. (voir page 34)
Lignes pointillées ou rayures	❑ Ajustez l'antenne. ❑ Éloignez le téléviseur de toute source d'interférences telles que des voitures, des signes néons ou des sèche-cheveux.
Le téléviseur de projection est bloqué sur un canal	❑ Utilisez l'option Auto Programmation du menu Canal pour ajouter des canaux pouvant être captées et ne figurant pas encore dans la mémoire de votre téléviseur de projection. (voir page 55) ❑ Vérifiez le réglage de l'option Canal Fixe. (voir page 55)
Images en double ou fantômes	❑ Utilisez une antenne extérieure directionnelle ou un câble. (lorsque le problème est causé par des réflexions provenant de montagnes ou de bâtiments voisins)
Impossible d'utiliser le menu	❑ Si l'élément que vous voulez choisir s'affiche en gris, vous ne pouvez pas le sélectionner. ❑ Mettez le téléviseur de projection hors tension puis sous tension.
Impossible de recevoir un canal de télévision par câble	❑ Utilisez l'option Auto Programmation du menu Canal pour ajouter des chaînes pouvant être captées et ne figurant pas encore dans la mémoire de votre téléviseur de projection. (voir page 55) ❑ Vérifiez vos réglages de câble. ❑ Assurez-vous que l'option Câble est bien réglée sur OUI dans le menu Canal. (voir page 54)
Impossible d'obtenir un volume suffisant lors de l'utilisation d'un décodeur	❑ Augmentez le volume du décodeur en utilisant la télécommande fournie avec ce dernier. Appuyez ensuite sur TV (FUNCTION) et réglez le volume du téléviseur de projection. Si vous utilisez votre câble pour utiliser les canaux par exemple, veillez à appuyer sur SAT/CABLE.
L'index des chaines n'affiche pas toutes les chaines disponibles	❑ Vérifiez que Câble est réglé sur OUI dans le menu Canal. (voir "Câble" à la page 54) ❑ Utilisez l'option Auto Programmation du menu Canal pour ajouter des chaînes pouvant être captées et ne figurant pas encore dans la mémoire de votre téléviseur de projection. (voir page 55)
Impossible de recevoir des canaux Impossible de sélectionner une chaîne	❑ Utilisez l'option Auto Programmation du menu Canal pour ajouter des chaînes pouvant être captées et ne figurant pas encore dans la mémoire de votre téléviseur de projection. (voir page 55)

Problème	Solutions envisageables
Oubli du mot de passe	❑ Dans l'écran de mot de passe (voir page 64), entrez le mot de passe de contrôle suivant : 4357. Le mot de passe de contrôle permet d'effacer votre mot de passe précédent mais ne peut pas être utilisé pour débloquer provisoirement les canaux.
Impossible de changer les canaux à l'aide de la télécommande	❑ Pour changer les canaux à partir d'un autre appareil, vérifiez que la sélection du canal 3 ou 4 du téléviseur de projection n'a pas été modifiée accidentellement. ❑ Lors de l'utilisation d'un autre dispositif pour commander les canaux, vérifiez que la touche "fonction" de ce dispositif est activée ou que le commutateur se trouve dans la bonne position.
Impossible de passer en revue les autres appareils raccordés au téléviseur de projection	❑ Vérifiez que la fonction Étiquette vidéo n'est pas en position "Sauter". (voir page 61)
Il y a une boîte noire à l'écran	❑ Une option de texte a été sélectionnée dans menu Réglage et aucun texte n'est offert. (Voir page 60 pour réinitialiser la sélection des réglages.) Pour désactiver cette fonction, sélectionnez NON dans l'option Sous-titres. Pour obtenir les sous-titres, choisisses l'option CC1 au lieu de Text 1-4.
Il n'y a pas de deuxième image ou seulement une image statique	❑ Vérifiez que le canal capté pour la deuxième image est réglé à une source vidéo ou sur un canal en cours de programmation. ❑ Il est possible qu'aucun appareil ne soit raccordé à l'entrée vidéo choisie. Essayez de passer en revue les entrées vidéo à l'aide de TV/VIDEO. ❑ La fonction Twin View n'est pas réglée pour recevoir un signal provenant de l'entrée AUX. Si un magnétoscope, un lecteur DVD ou un récepteur satellite sont raccordés à l'entrée AUX du téléviseur de projection, la deuxième image ne sera pas visible.
L'émission affichée dans la fenêtre est la même que celle de l'écran principal	❑ Les deux écrans sont peut-être réglés au même canal. Essayer de changer le canal d'une des deux images. ❑ Le raccordement choisi oblige peut-être à sélectionner les canaux à partir d'un décodeur. Le décodeur ne permet pas de recevoir plus d'un signal brouillé à la fois. Il est alors impossible d'utiliser la fonction Twin View. Si possible, raccordez directement un câble à l'entrée VHF/UHF du téléviseur de projection. (Cela fonctionnera seulement si le décodeur fournit un signal non brouillé.)
Seul les canaux provenant du téléviseur de projection apparaissent dans la deuxième image.	❑ Vérifiez que l'étiquette vidéo n'a pas été réglée pour sauter les entrées vidéo. Voir le menu Réglage à la page 61.
Canaux Préférés n'affiche pas vos choix	❑ Vérifiez que Canaux Préférés est réglé sur Manuel dans le menu Canal. (voir "Canal Préféré" à la page 54)
Des sources vidéo n'apparaissent pas lorsque vous appuyez sur TV/VIDEO	❑ Vérifiez que Etiquette Vidéo n'est pas défini sur Saute. (voir "Etiquette Vidéo" à la page 61)

Spécifications

Système de projection	3 tubes image, 3 objectifs, système en ligne horizontal	
Tube image	Tubes monochromes à haute luminosité de 7 pouces (taille de trame 6,3), avec couplage optique et système de refroidissement liquide	
Objectifs de projection	Objectif hybride haute performance, grand diamètre F1.1	
Antenne	Terminal externe 75 ohm pour VHF/UHF	
Système de télévision	Norme de télévision américaine/NTSC	
Taille de l'écran (en diagonale)	51 pouces (KP-51WS500) 57 pouces (KP-57WS500) 65 pouces (KP-65WS500)	
Couverture des canaux		
VHF	2-13	
UHF	14-69	
CATV	1-125	
Alimentation	120V, 60 Hz	
Nombre d'entrées/de sorties		
DVI-HDTV		1 prise, 3,3 V TMDS, 50 ohms La prise d'entrée DVI est conforme à la norme EIA-861 et n'est pas conçue pour une utilisation avec un ordinateur personnel.
Video (IN)	4	1 Vp-p, 75 ohm, non équilibré, sync négative
S Video (IN)	3	Y : 1 Vp-p, 75 ohm, non équilibré, sync négative C : 0,286 Vp-p (signal Burst), 75 ohm
Audio (IN)	6	500 mVrms (modulation 100 %) Impédance : 47 kilohm
AUDIO (VAR/FIX) OUT	1	500 mVrms pour un réglage maximum du volume (Variable) 500 mVrms (Fixed) Impédance (sortie): 1 kiloohm
TV Out	1	Vidéo: 1 Vp-p 75 ohm, non équilibré, sync négative Audio: 500 mVrms (100 % de modulation) Impédance (de sorties): 1 kiloohm
CONTROL-S (IN/OUT)	1	Minibroches
Entrée vidéo de composants	2 (Y, P_B, P_R)	Y : 1,0 Vp-p, 75 ohm, non équilibré, sync négative P_B : 0,7 Vp-p, 75 ohm P_R : 0,7 Vp-p, 75 ohm
Entrées RF	2	
Convertisseur	1	
Sortie haut-parleur	20 W × 2	
Dimensions (L/H/P)	47 1/8 × 51 5/8 × 24 7/8 pouces (1,194 × 1,310 × 630 mm) (KP-51WS500) 52 1/4 × 54 1/4 × 27 1/4 pouces (1,326 × 1,377 × 690 mm) (KP-57WS500) 61 × 57 × 29 pouces (1,542 × 1,452 × 735 mm) (KP-65WS500)	

Poids	167 livres 9 oz (76 kg) (KP-51WS500) 196 livres 3 oz (89 kg) (KP-57WS500) 275 livres 8 oz (125 kg) (KP-65WS500)
Consommation électrique	
En cours d'utilisation	230 W
En mode de veille	Inférieur à 1 W
Accessoires fournis	
Télécommande	RM-Y909
Piles AA (R6)	2 piles fournies pour la télécommande
Accessoires en option	
Câble AV	VMC-810/820/830 HG
Câble audio	RKC-515HG
Câble Control S	RK-G69HG
Câble vidéo de composants	VMC-10/30 HG
Récepteur AV	STR-V555ES ou équivalent

La conception et les spécifications peuvent faire l'objet de modifications sans préavis.

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PRINTING THE SERVICE MANUAL

The PDF of this service manual is not designed to be printed from cover to cover. The pages vary in size, and must therefore be printed in sections based on page dimensions.

NON-SCHEMATIC PAGES

Data that does NOT INCLUDE schematic diagrams are formatted to 8.5 x 11 inches and can be printed on standard letter-size and/or A4-sized paper.

SCHEMATIC DIAGRAMS

The schematic diagram pages are provided in two ways, full size and tiled. The full-sized schematic diagrams are formatted on paper sizes between 8.5" x 11" and 18" x 30" depending upon each individual diagram size. Those diagrams that are LARGER than 11" x 17" in full-size mode have been tiled for your convience and can be printed on standard 11" x 17" (tabloid-size) paper, and reassembled.

TO PRINT FULL SIZE SCHEMATIC DIAGRAMS

If you have access to a large paper plotter or printer capable of outputting the full-sized diagrams, output as follows:

1) Note the page size(s) of the schematics you want to output as indicated in the middle window at the bottom of the viewing screen.

2) Go to the File menu and select Print Set-up. Choose the printer name and driver for your large format printer. Confirm that the printer settings are set to output the indicated page size or larger.

3) Close the Print Set Up screen and return to the File menu. Select "Print..." Input the page number of the schematic(s) you want to print in the print range window. Choose OK.

TO PRINT TILED VERSION OF SCHEMATICS

Schematic pages that are larger than 11" x 17" full-size are provided in a 11" x 17" printable tiled format near the end of the document. These can be printed to tabloid-sized paper and assembled to full-size for easy viewing.

If you have access to a printer capable of outputting the tabloid size (11" x 17") paper, then output the tiled version of the diagram as follows:

1) Note the page number(s) of the schematics you want to output as indicated in the middle window at the bottom of the viewing screen.

2) Go to the File menu and select Print Set-up. Choose the printer name and driver for your printer. Confirm that the plotter settings are set to output 11" x 17", or tabloid size paper in landscape ( ) mode.

3) Close the Print Set Up screen and return to the File menu. Select "Print..." Input the page number of the schematic(s) you want to print in the print range window. Choose OK.

TO PRINT SPECIFIC SECTIONS OF A SCHEMATIC

To print just a particular section of a PDF, rather than a full page, access the Graphics Select tool in the Acrobat Reader tool bar.

1) To view the Graphics Select Tool, press and HOLD the mouse button over the Text Select Tool which looks like:
This tool will expand to reveal to additional tools.
Choose the Graphics Select tool by placing the cursor over the button on of the far right that looks like:

2) After selecting the Graphics Select Tool, place your cursor in the document window and the cursor will change to a plus (+) symbol. Click and drag the cursor over the area you want to print. When you release the mouse button, a marquee (or dotted lined box) will be displayed outlining the area you selected.

3) With the marquee in place, go to the file menu and select the "Print..." option. When the print window appears, choose the option under the section called "Print Range" which says "Selected Graphic".

Select OK and the output will print only the area that you outlined with the marquee.

(continued >)

ON-SCREEN SEARCH OPTION

All of the text within the service manual PDF is content searchable. This means that you can enter any text, word, phrase or reference number that appears in the manual, and the PDF software will search, find and move the cursor to the location where you requested text first appears. This feature can be particularly useful in locating components on a specific schematic or printed wire circuit board (PWB) diagrams.

Follow these steps to effectively locate a component on a schematic diagram:

1) Locate the schematic you want to search by clicking on the corresponding bookmark on the left side of the screen. The view on the right of the screen will then jump to the desired schematic page.

2) Magnify the diagram to at least 400% before conducting a component search. This will enable you to easily view the reference number when it is highlighted on screen. To do this, click on the magnifying glass button on the tool bar at the top of the screen. Move the cursor over the diagram and RIGHT click you mouse. Select the 400% magnification option on the pop-up menu. Click on the button with the icon of the open hand to deactivate the magnification tool

3) Search the diagram (or the entire manual) by clicking on the binocular button tool at the top of the screen. The “Find” window will appear and allow you to type in your desired text. Type in a reference designator, such as R502, and click on the “Find” button. If the component is not on the diagram, but is listed anywhere else in the manual, the cursor will jump to the first location the text is found in the file. To find another instance of that same text, click on the binocular button again and select “Find Again.”

Self Diagnosis Supported model

SERVICE MANUAL RA-6 CHASSIS

MODEL NAME	REMOTE COMMANDER	DESTINATION	CHASSIS NO.
KP-51WS500	*RM-Y909*	*US/CND*	*SCC-P65HA*
KP-57WS500	*RM-Y909*	*US/CND*	*SCC-P65JA*
KP-65WS500	*RM-Y909*	*US/CND*	*SCC-P65KA*

SUPPLEMENT - 1

SUBJECT: NEW CRT'S INTRODUCED AFFECTS
KP-57WS500 ONLY
S/N'S 9200001-92XXXXX

Correct the service manual as shown.
File this Supplement with the service manual.

☛ : Corrected Item

Section 2: Service Data Lists (Page 22)
Section 6: Exploded View
6-1. Cover (KP-51WS500/57WS500 ONLY) (Page 85)
6-4. Picture Tube (Page 88)

COLOR REAR VIDEO PROJECTOR

SONY

9-965-932-81

SERVICE DATA LISTS

CRT Driver CXA2150P-1

Reg.No	&Name	FUNCTION	RF	Cvideo	Svideo	Video5,6 480i	Video5,6 480P	Video5,6 1080i	P&P	Video7 vga	Video7 480i	Video7 480p	Video7 1080i
0	SBOT	Offset for SBRT	0	0	0	5	7	7	7	7	0	5	15
1	YOF	DC-offset for Y	0	0	0	0	0	0	0	7	5	7	7
2	CBOF	DC-offset for Cb	35	35	35	37	40	31	35	49	32	49	49
3	CROF	DC-offset for Cr	36	36	36	39	41	31	36	49	31	49	49
4	SBRT	Sub Bright											
5	RDRV	R output drive											
6	GDRV	G output drive	31										
7	BDRV	B output drive											
8	RCUT	R output cutoff											
9	GCUT	G output cutoff	31										
10	BCUT	B output cutoff											

			51WS500				57WS500				65WS500			
			Vivid	Std	Movie	Pro	Vivid	Std	Movie	Pro	Vivid	Std	Movie	Pro
11	WBSW	WB_S	0 (no memory)	0 (no memory)	0 (no memory)	0 (no memory)	0 (no memory)	0 (no memory)	0 (no memory)	0 (no memory)	0 (no memory)	0 (no memory)	0 (no memory)	0 (no memory)
12	SBOF	Offset for SBRT	63	63 (no memory	63	63 (no memory	63	63 (no memory	63	63 (no memory	63	63 (no memory	63	63 (no memory
13	RDOF	Offset for RDRV	64	63 (no memory	67	63 (no memory	65	63 (no memory	67	63 (no memory	65	63 (no memory	67	63 (no memory
14	GDOF	Offset for GDRV	63	63 (no memory	63	63 (no memory	63	63 (no memory	63	63 (no memory	63	63 (no memory	63	63 (no memory
15	BDOF	Offset for BDRV	69	63 (no memory	56	63 (no memory	69	63 (no memory	56	63 (no memory	69	63 (no memory	57	63 (no memory
16	RCOF	Offset for RCUT	63	63 (no memory	63	63 (no memory	63	63 (no memory	64	63 (no memory	62	63 (no memory	63	63 (no memory
17	GCOF	Offset for GCUT	63	63 (no memory	63	63 (no memory	63	63 (no memory	63	63 (no memory	63	63 (no memory	63	63 (no memory
18	BCOF	Offset for BCUT	65	63 (no memory	61	63 (no memory	66	63 (no memory	62	63 (no memory	65	63 (no memory	61	63 (no memory

CRT Driver CXA2150P-2 settings for Vivid mode

Reg.No	&Name	FUNCTION	
0	ALBK	PIC_ON:RGB output including AKB reference pulse on/of	1
1	RGBS	R_ON/G_ON/B_ON : R/G/B outputs on/off	7
2	BLKB	BLK_BTM:RGB output bottom limit level	3
3	LIML	PLIMIT_LEV:Threshold level for excessively high inputs	0
4	PABL	P_ABL:DC-level in RGB output detection for PEAK ABL	15
5	SABL	S_ABL:S ABL gain	0
6	AGNG	AGING_W/AGING_B:AGING_W/AGING_B modes on/of	0
7	AKBO	AKBOFF:Automatic/Manual =Cut off setting	0

			RF/Video1-4	Video5,6 480i	Video5,6 480P	Video5,6 1080i	P&P
8	SYPH	SYNC_PHASE:Hsync delay with respect to Video	0	0	0	0	0
9	CLPH	CLP_PHASE:Internal clamp pulse phase	3	3	3	3	3
10	CLGA	CLP_GATE:Switch for the gated internal clamp pulse with Hsync	0	0	0	0	0
11	JAXS	JAXIS:color axis switch	0				
12	BLKO	BLKO:Blanking switch	0				

SECTION 6: EXPLODED VIEWS

Components not identified by a part number or description are not stocked because they are seldom required for routine service.

The component parts of an assembly are indicated by the reference numbers in the far right column of the parts list and within the dotted lines of the diagram.

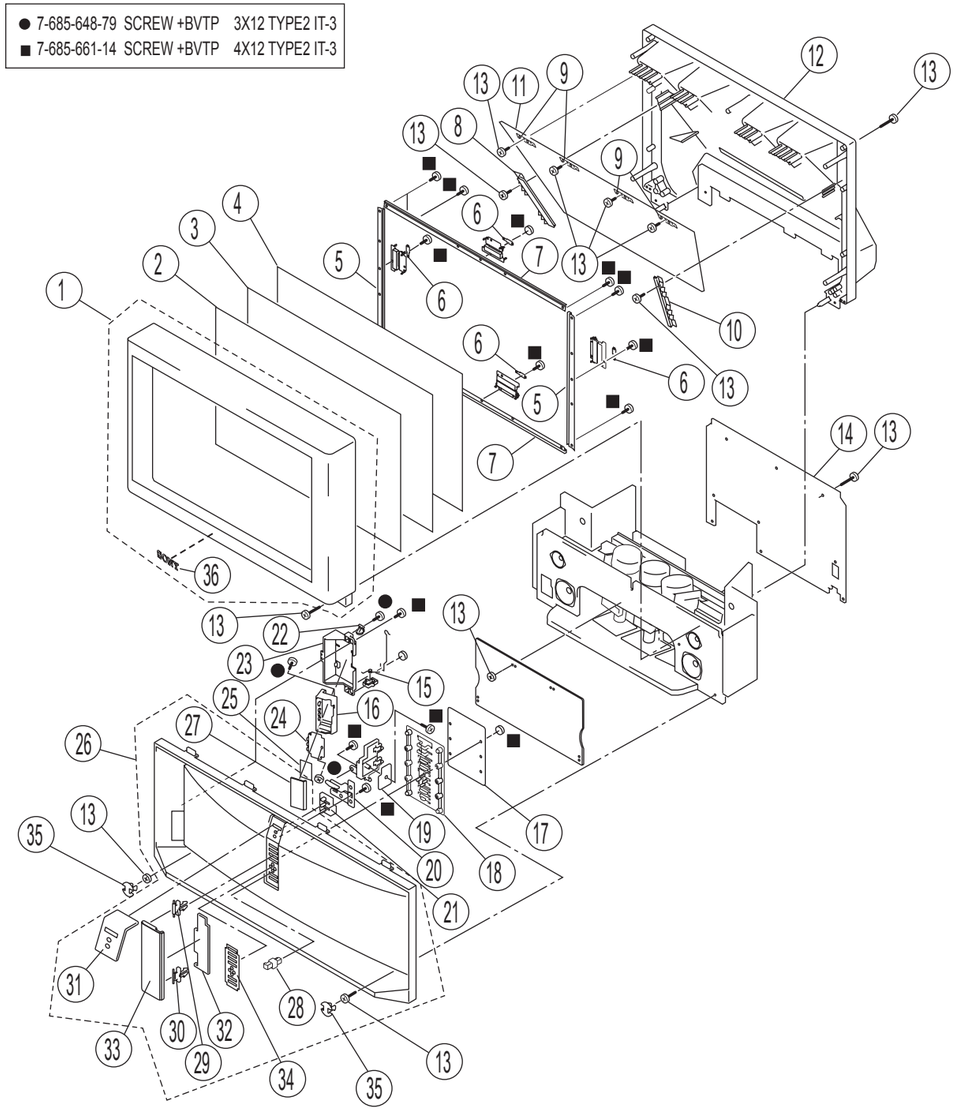
* Items marked with an asterisk are not stocked since they are seldom required for routine service. Expect some delay when ordering these components.

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

6-1. COVER (KP-51WS500/57WS500 ONLY)

● 7-685-648-79 SCREW +BVTP 3X12 TYPE2 IT-3
■ 7-685-661-14 SCREW +BVTP 4X12 TYPE2 IT-3



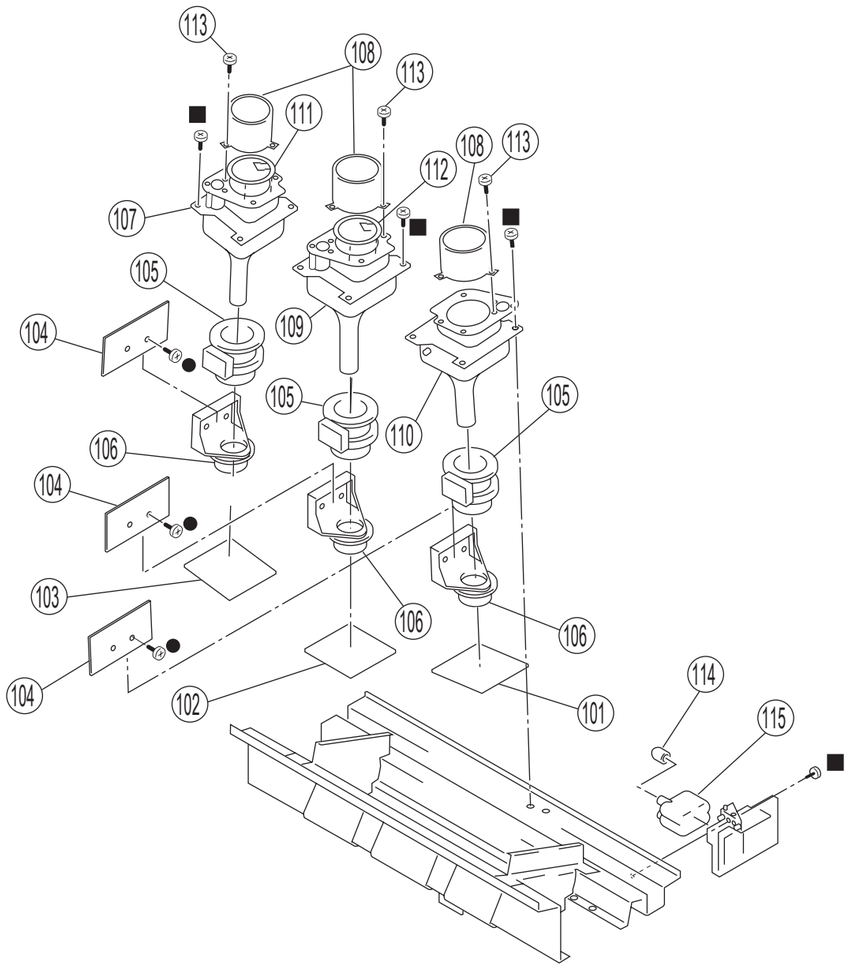
REF.NO.	PART NO.	DESCRIPTION	ASSEMBLY INCLUDES
1	* X-4040-804-1	BEZEL (51) ASSY (KP-51WS500 ONLY)	(36)
1	X-4040-796-1	BEZEL (57) ASSY (KP-57WS500 ONLY)	
2	4-090-910-11	SCREEN (51), CONTRAST (KP-51WS500 ONLY)	
2	4-090-881-11	SCREEN (57), CONTRAST (KP-57WS500 ONLY)	
3	4-081-952-11	PLATE (51WL), DIFFUSION (KP-51WS500 ONLY)	
3	4-081-949-11	PLATE (57WL), DIFFUSION (KP-57WS500 ONLY)	
4	4-081-953-11	PLATE (51WFV), DIFFUSION (KP-51WS500 ONLY)	
4	4-081-950-11	PLATE (57WFV), DIFFUSION (KP-57WS500 ONLY)	
5	* 4-084-617-12	HOLDER, SCREEN (KP-51WS500 ONLY)	
5	* 4-084-568-12	HOLDER, SCREEN (KP-57WS500 ONLY)	
6	* A-1391-148-A	S MOUNTED PC BOARD	
7	* 4-084-617-02	HOLDER, SCREEN (KP-51WS500 ONLY)	
7	* 4-084-568-02	HOLDER, SCREEN (KP-57WS500 ONLY)	
8	* 4-083-460-01	HOLDER (L), MIRROR SIDE (KP-51WS500 ONLY)	
8	* 4-083-462-01	HOLDER (L), MIRROR SIDE (KP-57WS500 ONLY)	
9	* 4-081-501-01	HOLDER, MIRROR	
10	* 4-083-459-01	HOLDER (R), MIRROR SIDE (KP-51WS500 ONLY)	
10	* 4-083-461-01	HOLDER (R), MIRROR SIDE (KP-57WS500 ONLY)	
11	4-084-615-01	MIRROR (51) (KP-51WS500 ONLY)	
11	4-084-561-01	MIRROR (57) (KP-57WS500 ONLY)	
12	* 4-083-467-01	COVER (51), MIRROR (KP-51WS500 ONLY)	
12	4-083-466-01	COVER (57), MIRROR (KP-57WS500 ONLY)	
13	4-081-063-01	SCREW,DOME WASHER HEX TAP 4X20	
14	* 4-090-913-01	BOARD (51), REAR (KP-51WS500 ONLY)	
14	* 4-090-883-01	BOARD (57), REAR (KP-57WS500 ONLY)	
15	4-083-505-01	SPRING, DOOR	
16	4-082-288-02	BRACKET, H3	
17	* A-1401-059-A	H2 MOUNTED PC BOARD	
18	4-082-284-01	BUTTON, MULTI	
19	* A-1401-060-A	H1 MOUNTED PC BOARD	
20	4-082-283-01	BUTTON, POWER	
21	4-083-733-01	GUIDE (HW), LED	
22	4-919-393-01	DAMPER	
23	4-082-289-01	HOLDER, FRONT TERMINAL	
24	* A-1401-061-A	H3 MOUNTED PC BOARD	
25	4-086-330-01	LABEL, FRONT TERMINAL	
26	X-4040-803-1	GRILLE ASSY (51), SPEAKER (KP-51WS500 ONLY)	(27-31)
26	X-4040-794-1	GRILLE ASSY (57), SPEAKER (KP-57WS500 ONLY)	(27-31)
27	4-083-468-01	DOOR, FRONT TERMINAL	
28	4-042-192-01	CATCHER, PUSH	
29	4-045-250-01	DAMPER	
30	3-703-035-11	SHAFT, LID	
31	4-090-018-11	PANEL (ASSY), FRONT	(32)
32	4-090-019-01	DOOR, CONTROL (HW)	
33	4-083-730-01	DOOR (HW), FRONT	
34	4-084-571-03	LABEL (HW), CONTROL	
35	4-083-503-21	SCREW CAP, GRILLE	
36	3-704-179-01	EMBLEM (NO.10), SONY (KP-51WS500 ONLY)	
36	4-381-079-01	EMBLEM (NO.10), SONY (KP-57WS500 ONLY)	

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

6-4. PICTURE TUBE

■ 7-685-663-71 SCREW +BVTP 4X16 TYPE2 IT-3



REF.NO.	PART NO.	DESCRIPTION
101	* A-1401-058-A	CB MOUNTED PC BOARD
102	* A-1401-057-A	CG MOUNTED PC BOARD
103	* A-1401-056-A	CR MOUNTED PC BOARD
104	* A-1342-598-A	V MOUNT
⚠ 105	1-451-542-21	DEFLECTION YOKE (KP-51WS500 ONLY)
⚠ 105	1-451-536-21	DEFLECTION YOKE (KP-57WS500 ONLY)
⚠ 105	1-451-537-22	DEFLECTION YOKE (KP-65WS500 ONLY)
⚠ 106	1-452-790-31	NECK ASSY
⚠ 107	8-733-650-15	CRT 07MVC31(R)-L(FL) (KP-51WS500 ONLY)
⚠ 107	8-733-648-15	CRT 07MVC41(R)-L(FL) (KP-57WS500 ONLY BEFORE SERIAL #9200001)
⚠ 107	8-733-698-05	CRT 07MVC41(R)-L(FLM) (KP-57WS500 ONLY AFTER SERIAL #9200001)
⚠ 107	8-733-666-05	CRT 07MVC61(R)-L(FL) (KP-65WS500 ONLY)
108	4-083-751-01	LENS (DELTA 250) (KP-51WS500 ONLY)
108	4-083-750-01	LENS (DELTA 260) (KP-57WS500 ONLY)
108	4-087-842-01	LENS (DELTA 270) (KP-65WS500 ONLY)
⚠ 109	8-733-652-15	CRT 07MVC21(G)-L(FL) (ALL EXCEPT KP-57WS500 AFTER SERIAL #9200001)
⚠ 109	8-733-694-05	CRT 07MVC21(G)-L(FLM) (KP-57WS500 ONLY AFTER SERIAL #9200001)
⚠ 110	8-733-649-15	CRT 07MVC31(B)-L(FL) (KP-51WS500 ONLY)
⚠ 110	8-733-647-15	CRT 07MVC41(B)-L(FL) (KP-57WS500 ONLY BEFORE SERIAL #9200001)
⚠ 110	8-733-697-05	CRT 07MVC41(B)-L(FLM) (KP-57WS500 ONLY AFTER SERIAL #9200001)
⚠ 110	8-733-665-05	CRT 07MVC61(B)-L(FL) (KP-65WS500 ONLY)
111	4-088-542-01	SHADE (R) (KP-57WS500/65WS500 ONLY)
112	4-088-543-01	SHADE (G) (KP-57WS500/65WS500 ONLY)
113	4-081-063-01	SCREW, DOME WASHER HEX TAP (4 X 20)
114	4-373-137-01	CAP (Z), RUBBER
⚠ 115	8-598-955-32	BLOCK ASSY, HV HVB-1031

Sony Corporation
Sony Technology Center
Technical Services
Service Promotion Department

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Self Diagnosis Supported model

SERVICE MANUAL

RA-6 CHASSIS

MODEL NAME	REMOTE COMMANDER	DESTINATION	CHASSIS NO.
KP-51WS500	*RM-Y909*	*US/CND*	*SCC-P65HA*
KP-57WS500	*RM-Y909*	*US/CND*	*SCC-P65JA*
KP-65WS500	*RM-Y909*	*US/CND*	*SCC-P65KA*

CORRECTION - 1

SUBJECT: HV HOLD DOWN CIRCUIT OPERATION
CHECK AND ADJUSTMENT TABLE
CORRECTED
ADDED LOCATOR LISTS

Correct the service manual as shown.
File this Correction with the service manual.

☛ : Corrected Item

Section 3: Safety-Related Adjustments (Page 45)
3-2. HV Hold Down Circuit Operation Check and Adjustment
(C8188 should be C8118)

Section 5: Diagrams (Page 49, 62, 72 & 73)
5-2. Printed Wiring Boards and Schematic Diagrams Information
(C8188 should be C8118)
5-4. Schematics and Supporting Information
Added Locator Lists to D and A PWBs

COLOR REAR VIDEO PROJECTOR

SONY®

Sony Corporation
Sony Technology Center
Technical Services
Service Promotion Department

English
2002JJ74WEB-1
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9-965-932-91

SECTION 3: SAFETY-RELATED ADJUSTMENTS

D BOARD

3-1. HV REGULATION CIRCUIT CHECK AND ADJUSTMENT

When replacing the following components marked with a ◪ on the schematic diagram always check the HV regulation, and if necessary re-adjust.

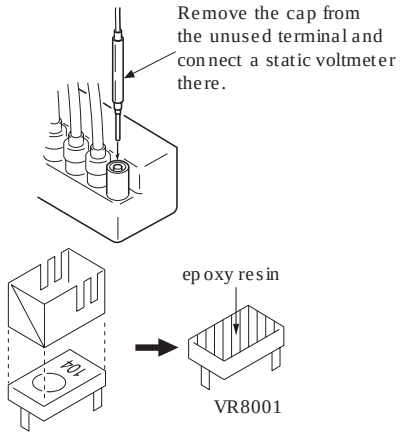
Part Replaced (◪)	Adjustment (⋈)
A BOARD: C8079, C8083, C8090, C8129, D8013, D8015, D8038, D8043, IC8006, Q8021, R8055, R8099, R8102, R8128, R8129, R8131, R8139, R8140, R8142, R8153, R8163, R8223, R8230, T8004 (LOT), T8005 (FBT), HV Block, D Board	**HV REGULATOR** VR8001

OPERATION CHECK

1. Receive the all white signal.
2. Set PIC MAX/BRT CENT.
3. Confirm that the voltage between CN8015 ① PIN and GND is less than 7.80VDC.

HV REGULATION ADJUSTMENT

1. Connect a HV static voltmeter to the unconnected plug of the high-voltage block.
2. Power on the set.
3. Receive the all white signal.
4. Set PIC MAX/BRT CENT.
5. Confirm that the static voltmeter reading is 31.0 ± 0.4V.
   If not, adjust with VR8001 to the specified value.
6. After adjustment, put the VR cover on VR8001 (as shown below) and apply sufficient amount of epoxy resin around VR8001.



3-2. HV HOLD DOWN CIRCUIT OPERATION CHECK AND ADJUSTMENT

When replacing the following components marked with a ◪ on the schematic diagram always check the hold-down voltage and re-adjust when necessary.

Part Replaced (◪)	Adjustment (⋈)
A BOARD: C8054, C8086, C8088, C8100, C8104, C8118, C8123, C8124, D8019, D8020, D8022, D8028, D8036, FB8001, IC8008, Q8035, Q8038, R8035, R8043, R8159, R8166, R8171, R8196, R8201, T8004 (LOT), T8005 (FBT), HV Block, D Board	**HV HOLD DOWN** VR8002

OPERATION CHECK

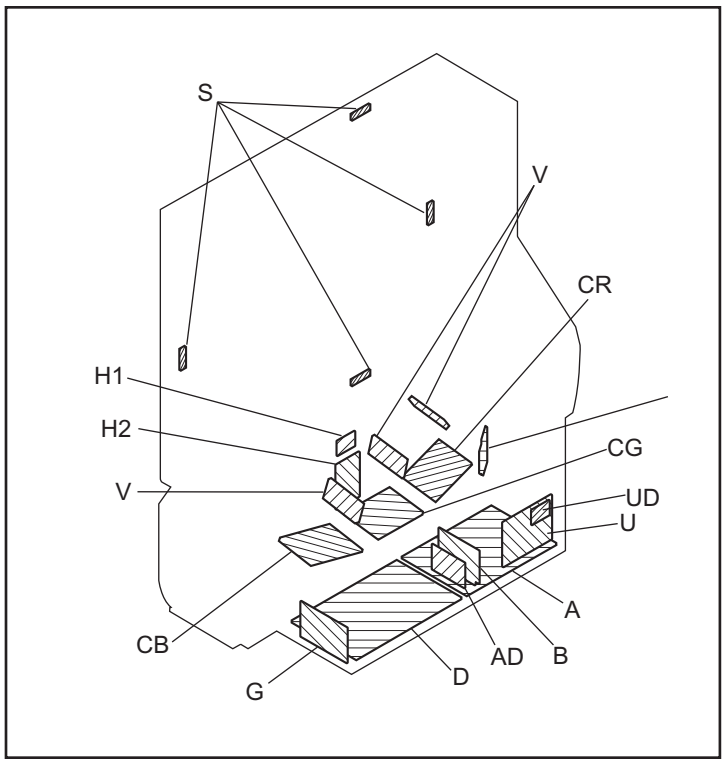
1. Receive the dot signal.
2. Set PIC MIN/BRT MIN.
3. Confirm that the voltage between cathode of D8038 (JW171) and GND is more than 23.0V DC.
4. Using an external DC Power supply, apply the voltage shown below between cathode of D8038 (JW171) on “D” and GND, then confirm that the HV-Prot circuit works. (Raster disappears)
   Apply DC voltage: Less than 29.05V DC.

HV HOLD-DOWN ADJUSTMENT

1. Connect a HV static voltmeter to the unconnected plug of the high-voltage block.
2. Power on the set.
3. Connect an external 10kΩ VR at CN8015 and adjust this VR so that the high voltage is 34.50kV.
4. Adjust VR8002 to the point that the HV-Prot circuit works (Raster disappears) at 34.50 ± 0.50kV reading on the static voltmeter.
5. After adjustment, put the VR cover on VR8002 and apply sufficient amount of epoxy resin around VR8002 as the same manner for VR8001.

SECTION 5: DIAGRAMS

5-1. CIRCUIT BOARDS LOCATION



5-2. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS INFORMATION

All capacitors are in µF unless otherwise noted. pF : µµF 50WV or less are not indicated except for electrolytics and tantalums.

All electrolytics are in 50V unless otherwise specified.

All resistors are in ohms. K=1000, M=1000k

Indication of resistance, which does not have one for rating electrical power, is as follows: Pitch : 5mm
Rating electrical power : $^1/_4$ W

$^1/_4$ W in resistance, $^1/_{10}$ W and $^1/_8$ W in chip resistance.

: nonflammable resistor.

: fusible resistor.

: internal component.

: panel designation and adjustment for repair.

: earth ground

: earth-chassis

All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

Readings are taken with a NTSC color-bar signal input.

Readings are taken with a 10M digital multimeter.

Voltages are DC with respect to ground unless otherwise noted.

Voltage variations may be noted due to normal production tolerances.

All voltages are in V.

S : Measurement impossibillity.

: B+ line

: B-line. (Actual measured value may be different).

: signal path. (RF)

Circled numbers are waveform references.

The components identified by ⋈ in this basic schematic diagram have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be necessary, replace only with the value originally used.

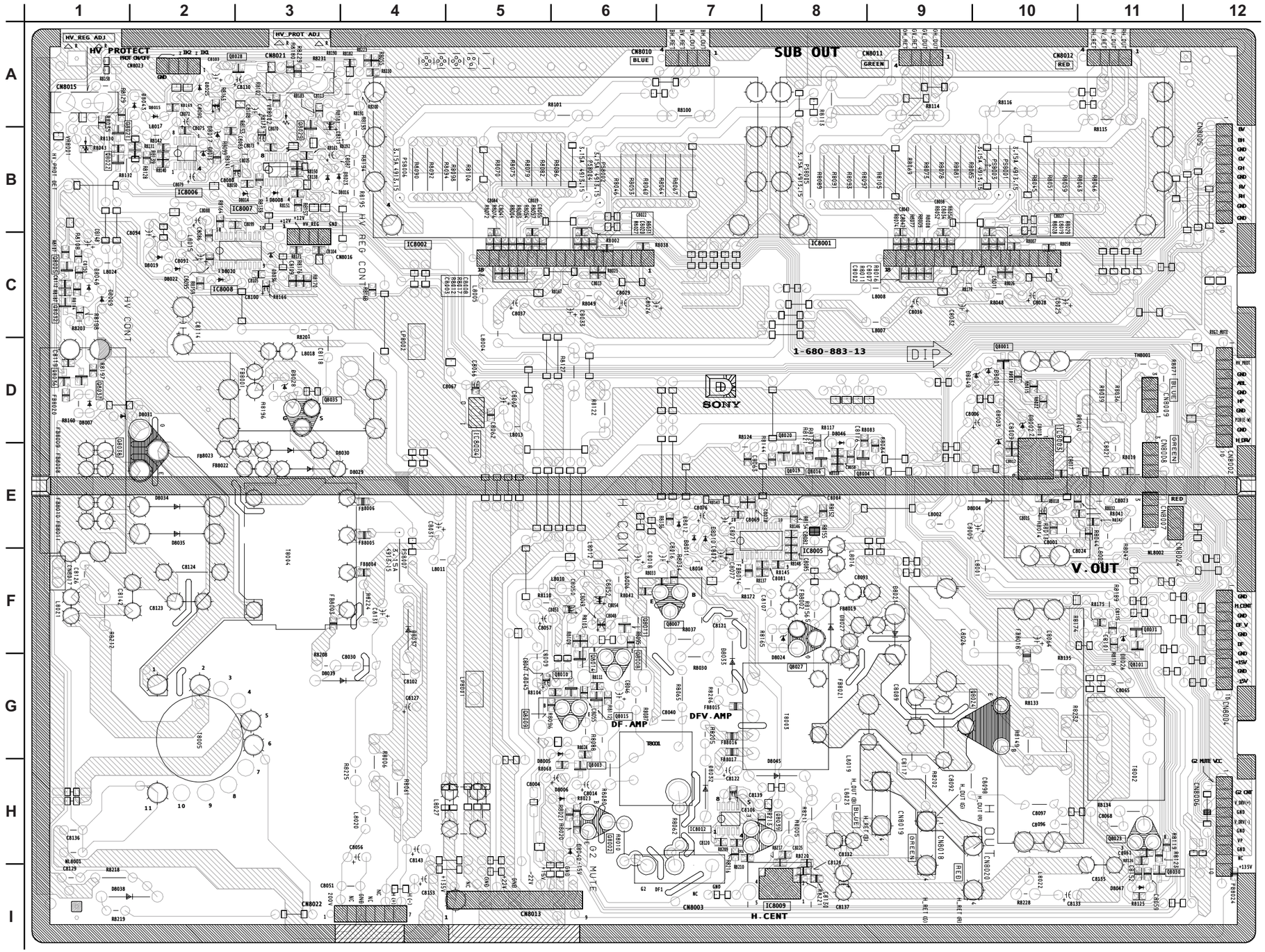
When replacing components identified by ◪, make the necessary adjustments as indicated. If the results do not meet the specified value, change the component identified by ⋈ and repeat the adjustment until the specified value is achieved.

(Refer to adjustments in Sections 3-1 and 3-2.)

When replacing the parts listed in the table below, it is important to perform the related adjustments.

Part Replaced (◪)	Adjustment (⋈)
A BOARD: C8079, C8083, C8090, C8129, D8013, D8015, D8038, D8043, IC8006, Q8021, R8055, R8099, R8102, R8128, R8129, R8131, R8139, R8140, R8142, R8153, R8163, R8223, R8230, T8004 (LOT), T8005 (FBT), HV Block, D Board	**HV REGULATOR** VR8001
A BOARD: C8054, C8086, C8088, C8100, C8104, C8118, C8123, C8124, D8019, D8020, D8022, D8028, D8036, FB8001, IC8008, Q8035, Q8038, R8035, R8043, R8159, R8166, R8171, R8196, R8201, T8004 (LOT), T8005 (FBT), HV Block, D Board	**HV HOLD DOWN** VR8002

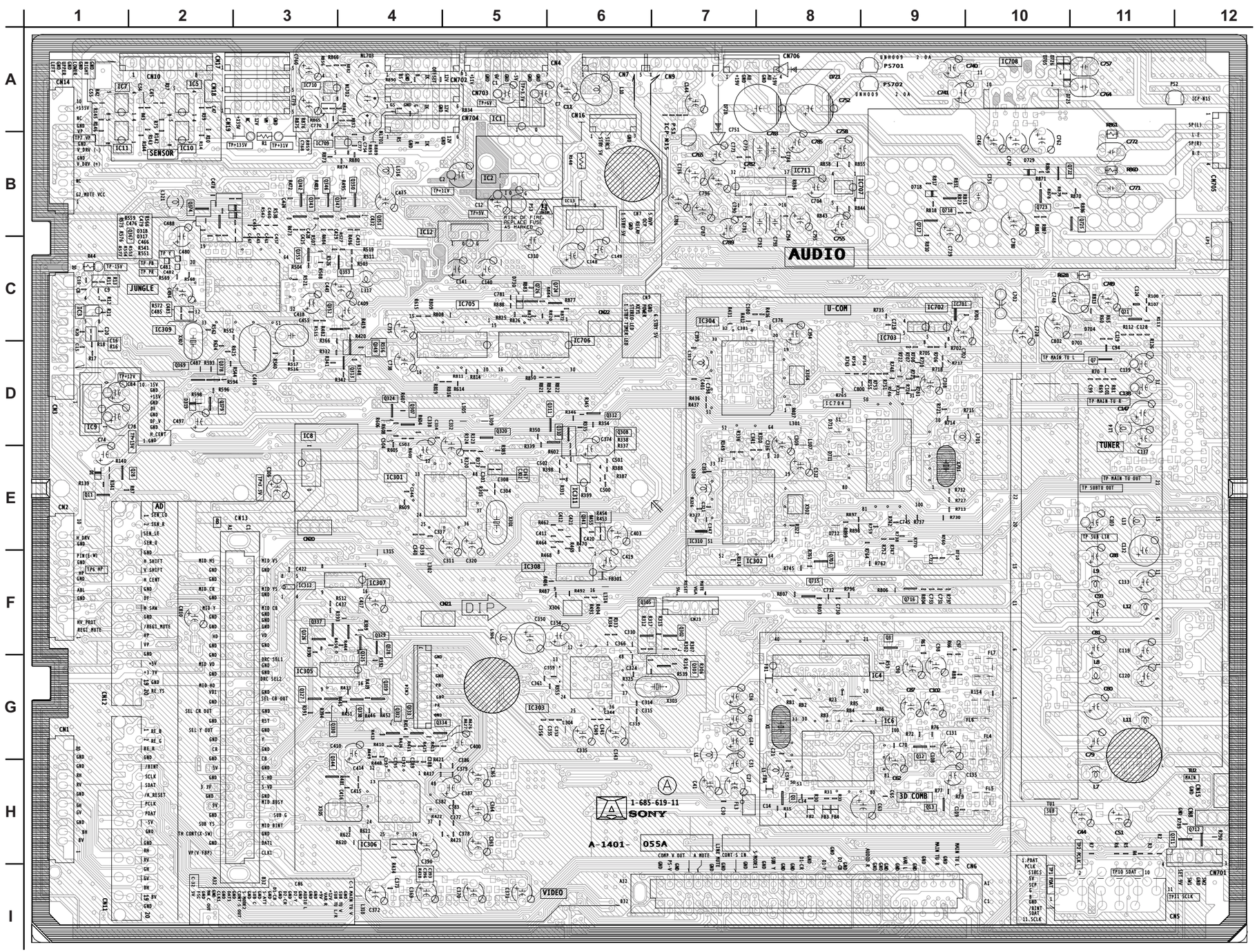
D [HV DRIVE, POWER SUPPLY, H DRIVE] [COMPONENT SIDE]



D BOARD LOCATOR LIST

DIODE		IC	
D8001	D-10	IC8001	C-8
D8002	D-10	IC8002	C-4
D8003	D-10	IC8003	E-10
D8004	E-10	IC8004	E-5
D8005	H-6	IC8005	F-8
D8006	H-6	IC8006	B-2
D8007	D-10	IC8007	B-3
D8008	B-3	IC8008	C-2
D8009	C-1	IC8009	I-8
D8010	E-11	IC8012	H-7
D8011	E-11	TRANSISTOR	
D8012	E-11	Q8001	D-10
D8013	B-2	Q8002	H-6
D8014	B-3	Q8003	H-6
D8015	A-2	Q8004	E-9
D8016	B-3	Q8005	C-1
D8019	C-2	Q8007	F-7
D8020	C-2	Q8008	G-6
D8021	F-9	Q8009	G-5
D8022	C-2	Q8010	G-6
D8023	B-3	Q8011	F-6
D8024	G-7	Q8014	G-6
D8025	A-2	Q8015	G-6
D8026	G-11	Q8016	E-8
D8027	F-8	Q8019	E-8
D8028	D-3	Q8020	D-8
D8029	E-4	Q8021	B-1
D8030	E-4	Q8022	B-1
D8031	D-2	Q8023	H-11
D8032	H-7	Q8024	G-10
D8033	G-7	Q8027	F-8
D8034	E-2	Q8028	A-2
D8035	E-2	Q8029	B-3
D8036	C-3	Q8030	I-11
D8037	G-4	Q8031	F-11
D8038	I-2	Q8032	C-1
D8039	G-4	Q8035	D-3
D8043	B-1	Q8036	D-1
D8045	H-8	Q8037	D-1
D8046	D-8	Q8038	D-1
D8047	I-11	Q8039	H-8
		Q8101	G-11

A [TUNER, 3D COMB, AREG, CRT DRIVE, YCT, SYSTEM CONTROL, AUDIO OUTPUT] [COMPONENT SIDE]

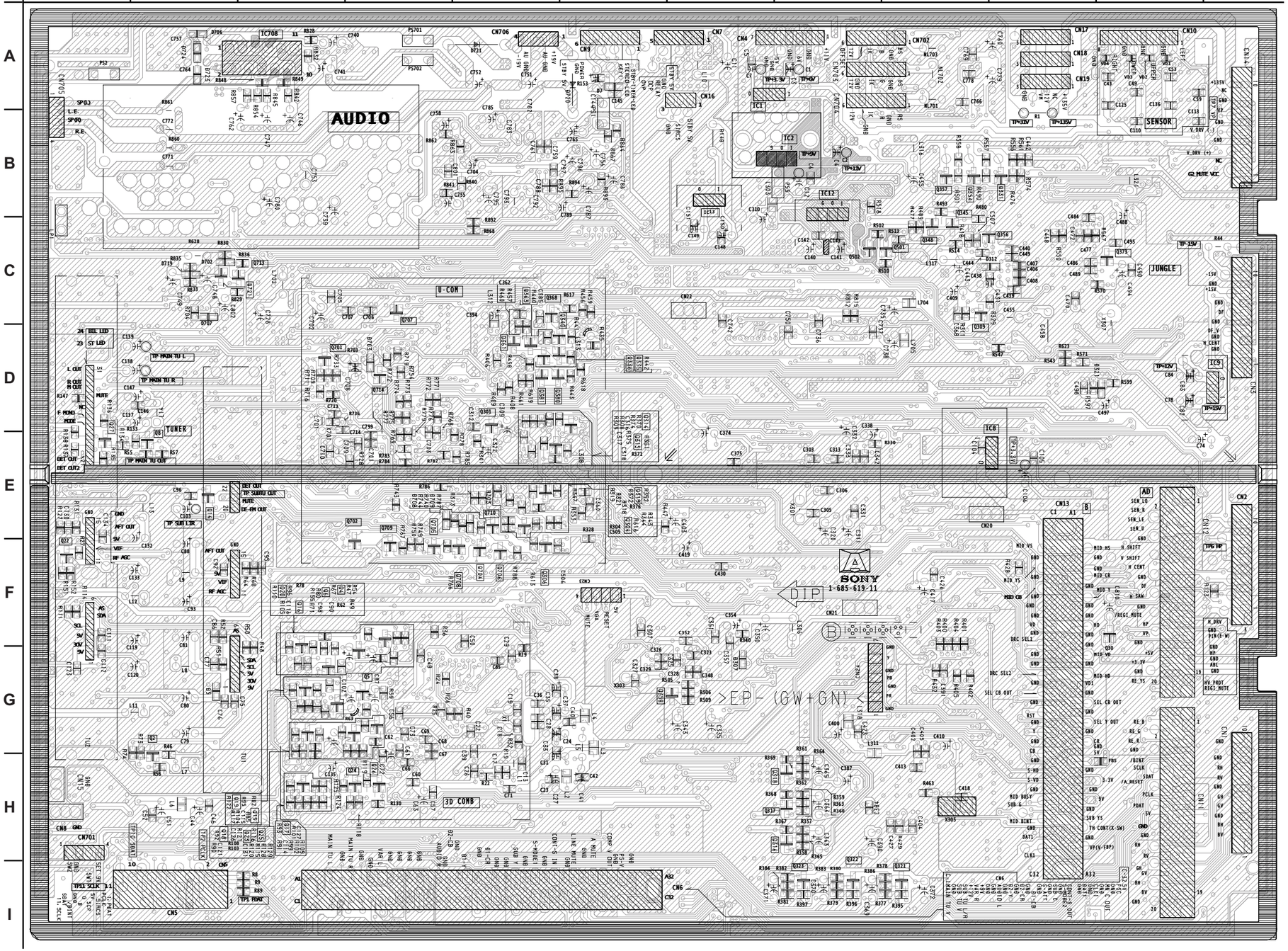


A BOARD LOCATOR LIST

DIODE		TRANSISTOR	
D1	E-1	Q11	E-1
D317	C-2	Q12	G-9
D318	C-2	Q13	H-9
D319	D-2	Q21	C-11
D701	C-11	Q302	F-7
D704	C-11	Q303	F-7
D705	A-10	Q305	F-6
D710	F-9	Q307	D-4
D711	E-8	Q308	B-6
D712	E-8	Q310	D-5
D713	D-8	Q311	D-5
D718	B-9	Q312	D-6
D725	A-10	Q313	D-4
D726	A-10	Q320	D-5
D729	B-10	Q324	D-4
IC		Q325	F-4
IC1	A-5	Q326	F-4
IC2	B-5	Q327	G-3
IC3	C-1	Q328	F-4
IC4	G-9	Q329	F-4
IC5	A-2	Q330	G-3
IC6	G-9	Q332	G-4
IC7	A-2	Q333	G-4
IC8	D-3	Q334	G-4
IC9	D-1	Q337	F-3
IC10	B-2	Q338	G-4
IC11	B-1	Q339	G-4
IC12	B-4	Q341	E-6
IC13	B-6	Q342	B-3
IC301	E-4	Q343	B-3
IC302	F-7	Q344	G-3
IC303	G-5	Q346	B-3
IC304	C-7	Q347	B-3
IC305	G-3	Q349	D-4
IC306	H-4	Q350	B-4
IC307	F-4	Q351	B-4
IC308	F-5	Q352	C-3
IC309	C-2	Q353	C-4
IC310	E-7	Q355	C-3
IC311	E-6	Q367	C-1
IC312	F-3	Q369	D-2
IC701	C-9	Q374	B-2
IC702	C-9	Q378	D-2
IC703	C-9	Q379	D-2
IC704	D-8	Q703	F-8
IC707	B-8	Q712	H-12
IC708	A-10	Q715	F-8
IC711	B-8	Q716	F-9
TRANSISTOR		Q717	B-9
Q1	H-8	Q718	B-9
Q3	F-9	Q722	B-10
Q7	D-11	Q723	B-10
		Q725	B-11

A

[TUNER, 3D COMB, AREG, CRT DRIVE, YCT, SYSTEM CONTROL, AUDIO OUTPUT] [CONDUCTOR SIDE]



A BOARD LOCATOR LIST

DIODE		TRANSISTOR	
D5	G-2	Q321	I-9
D7	A-6	Q322	I-9
D307	G-7	Q323	I-8
D312	C-9	Q331	B-9
D321	D-10	Q335	D-5
D702	C-2	Q336	D-5
D703	D-4	Q340	C-5
D706	A-2	Q345	B-9
D708	E-4	Q348	C-9
D709	E-4	Q354	B-9
D719	C-2	Q356	B-10
D720	B-6	Q357	B-9
D721	A-5	Q358	G-6
D723	A-2	Q361	C-5
D724	A-2	Q363	C-5
TRANSISTOR		Q368	C-5
Q2	G-2	Q373	C-11
Q4	F-3	Q380	D-5
Q5	G-4	Q381	D-5
Q6	F-3	Q501	C-9
Q8	E-2	Q502	C-8
Q14	E-2	Q701	D-3
Q15	F-3	Q702	E-3
Q16	F-3	Q704	F-5
Q17	H-3	Q705	F-5
Q18	F-3	Q706	F-5
Q19	F-3	Q707	C-4
Q20	F-3	Q708	F-4
Q22	F-1	Q709	E-4
Q23	G-4	Q710	E-5
Q24	H-4	Q713	C-3
Q25	G-4	Q714	D-4
Q26	H-4	Q721	C-3
Q27	D-11		
Q28	G-4		
Q30	F-11		
Q301	D-5		
Q304	E-6		
Q306	F-5		
Q309	C-9		
Q314	E-5		
Q315	E-5		
Q316	H-7		
Q317	H-7		
Q318	H-7		
Q319	E-6		

SERVICE MANUAL

RA-6 CHASSIS

MODEL NAME	REMOTE COMMANDER	DESTINATION	CHASSIS NO.
KP-51WS500	*RM-Y909*	*US/CND*	*SCC-P65HA*
KP-57WS500	*RM-Y909*	*US/CND*	*SCC-P65JA*
KP-65WS500	*RM-Y909*	*US/CND*	*SCC-P65KA*

SUPPLEMENT - 2

SUBJECT: NEW CRT'S INTRODUCED
AFFECTS S/N'S 9,700,001 AND UP

Correct the service manual as shown.
File this Supplement with the service manual.

COLOR REAR VIDEO PROJECTOR

SONY®

9-965-932-82

Section 6: Exploded Views
6-4. Picture Tube

When replacing CRT's for models with S/N 9,700,001 and up, please use the following P/N's:

For KP-51WS500

A-1502-023-A	Coupler (R) Assy., CRT
A-1502-025-A	Coupler (G) Assy., CRT
A-1502-024-A	Coupler (B) Assy., CRT

For KP-57WS500

A-1502-021-A	Coupler (R) Assy., CRT
A-1502-025-A	Coupler (G) Assy., CRT
A-1502-022-A	Coupler (B) Assy., CRT

For KP-65WS500

A-1604-409-A	Coupler (R) Assy., CRT
A-1502-025-A	Coupler (G) Assy., CRT
A-1604-410-A	Coupler (B) Assy., CRT

Sony Corporation
Sony Technology Center
Technical Services
Service Promotion Department

English
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Printed in USA
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9-965-932-82

SERVICE MANUAL RA-6 CHASSIS

MODEL NAME	REMOTE COMMANDER	DESTINATION	CHASSIS NO.
KP-51WS500	*RM-Y909*	*US/CND*	*SCC-P65HA*
KP-57WS500	*RM-Y909*	*US/CND*	*SCC-P65JA*
KP-65WS500	*RM-Y909*	*US/CND*	*SCC-P65KA*

SUPPLEMENT - 3

SUBJECT: ADDITIONAL INFORMATION ADDED TO SUPPLEMENT -2. D AND C BOARD P/N'S ADDED

Correct the service manual as shown.
File this Supplement with the service manual.

COLOR REAR VIDEO PROJECTOR

SONY®

9-965-932-83

Section 6: Exploded Views
6-4. Picture Tube

When replacing CRT's for models with S/N 9,700,001 and up, please use the following P/N's:

For KP-51WS500

A-1502-023-A	Coupler (R) Assy., CRT
A-1502-025-A	Coupler (G) Assy., CRT
A-1502-024-A	Coupler (B) Assy., CRT

For KP-57WS500

A-1502-021-A	Coupler (R) Assy., CRT
A-1502-025-A	Coupler (G) Assy., CRT
A-1502-022-A	Coupler (B) Assy., CRT

For KP-65WS500

A-1604-409-A	Coupler (R) Assy., CRT
A-1502-025-A	Coupler (G) Assy., CRT
A-1604-410-A	Coupler (B) Assy., CRT

If it is necessary to replace a D or C Board for models with S/N 9,700,001 and up, please order the following:

D Board, Complete	A-1302-119-A
CR Board, Complete	A-1302-120-A
CG Board, Complete	A-1302-122-A
CB Board, Complete	A-1302-121-A

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Service Promotion Department

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9-965-932-83

SERVICE MANUAL RA-6 CHASSIS

MODEL NAME	REMOTE COMMANDER	DESTINATION	CHASSIS NO.
KP-51WS500	*RM-Y909*	*US/CND*	*SCC-P65HA*
KP-57WS500	*RM-Y909*	*US/CND*	*SCC-P65JA*
KP-65WS500	*RM-Y909*	*US/CND*	*SCC-P65KA*

CORRECTION - 2

SUBJECT: UPDATED DATA RELATING TO CR, CG AND CB BOARDS

Correct the service manual as shown.
File this Correction with the service manual.

(☛ : Corrected Item:

Section 5: Diagrams
5-4. Schematics and Supporting Information
New CR, CG and CB Boards (Pages 55-57)

Section 6: Exploded Views
6-4. Picture Tube
New CR, CG and CB Board Part Numbers (Page 88)

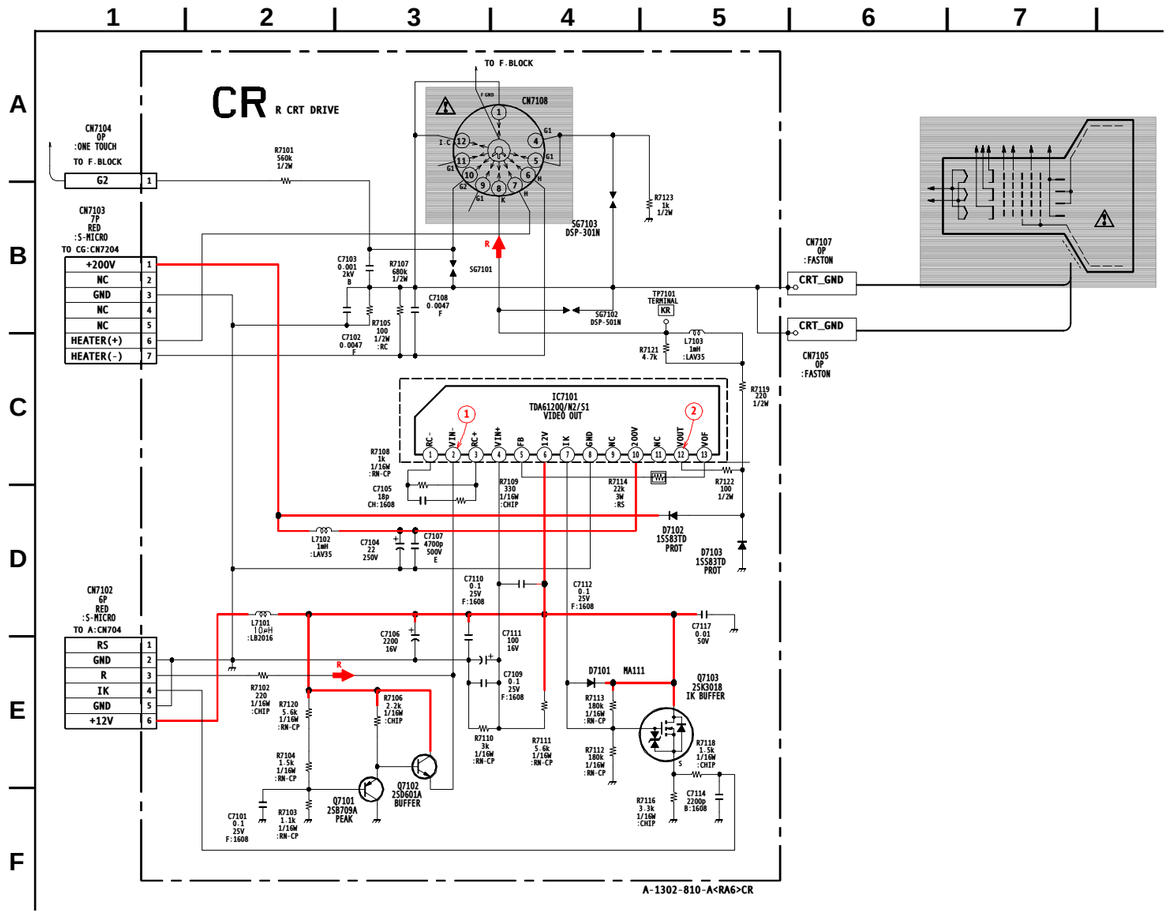
Section 7: Electrical Parts List
New Parts Lists for CR, CG and CB Boards (Pages 90-92)

COLOR REAR VIDEO PROJECTOR

SONY®

9-965-932-92

CR BOARD SCHEMATIC DIAGRAM



CR BOARD WAVEFORMS

1	2
2.0 Vp-p (H)	84.5 Vp-p (H)

CR BOARD IC VOLTAGE LIST

IC7101			
PIN	VOLT	PIN	VOLT
1	2.0	8	GND
2	2.7	9	N/C
3	3.4	10	200.0
4	4.1	11	N/C
5	2.6	12	157.7
6	12.0	13	158.2
7	7.0		

All voltages are in V.

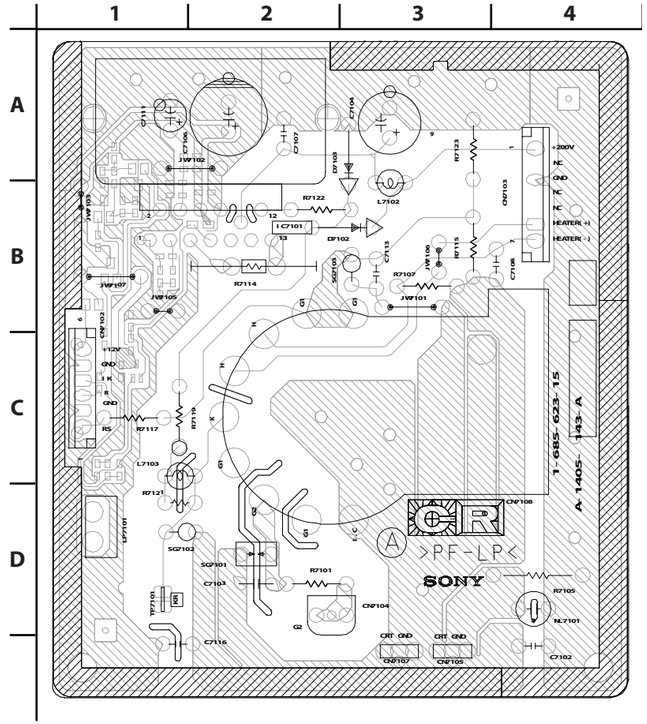
CR BOARD TRANSISTOR LIST

	B	C	E
Q7101	1.7	GND	2.3
Q7102	2.3	12.0	2.7

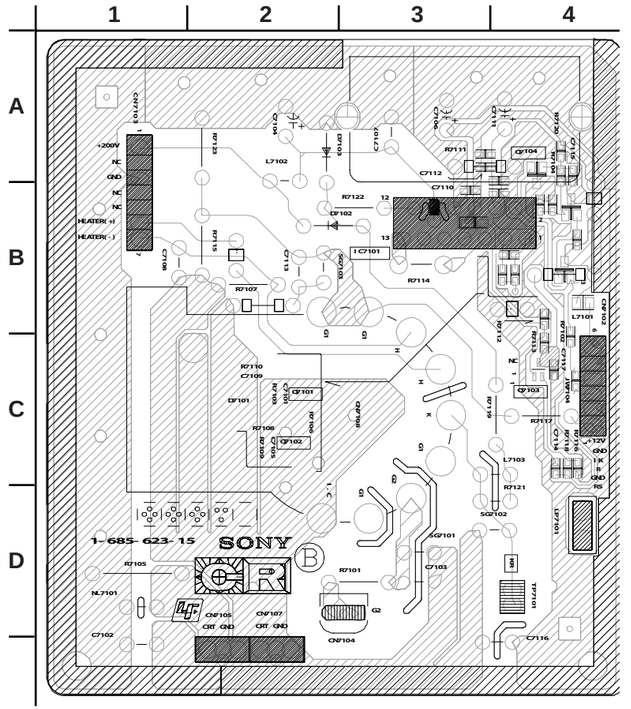
	G	D	S
Q7103	7.0	12.0	5.7

All voltages are in V.

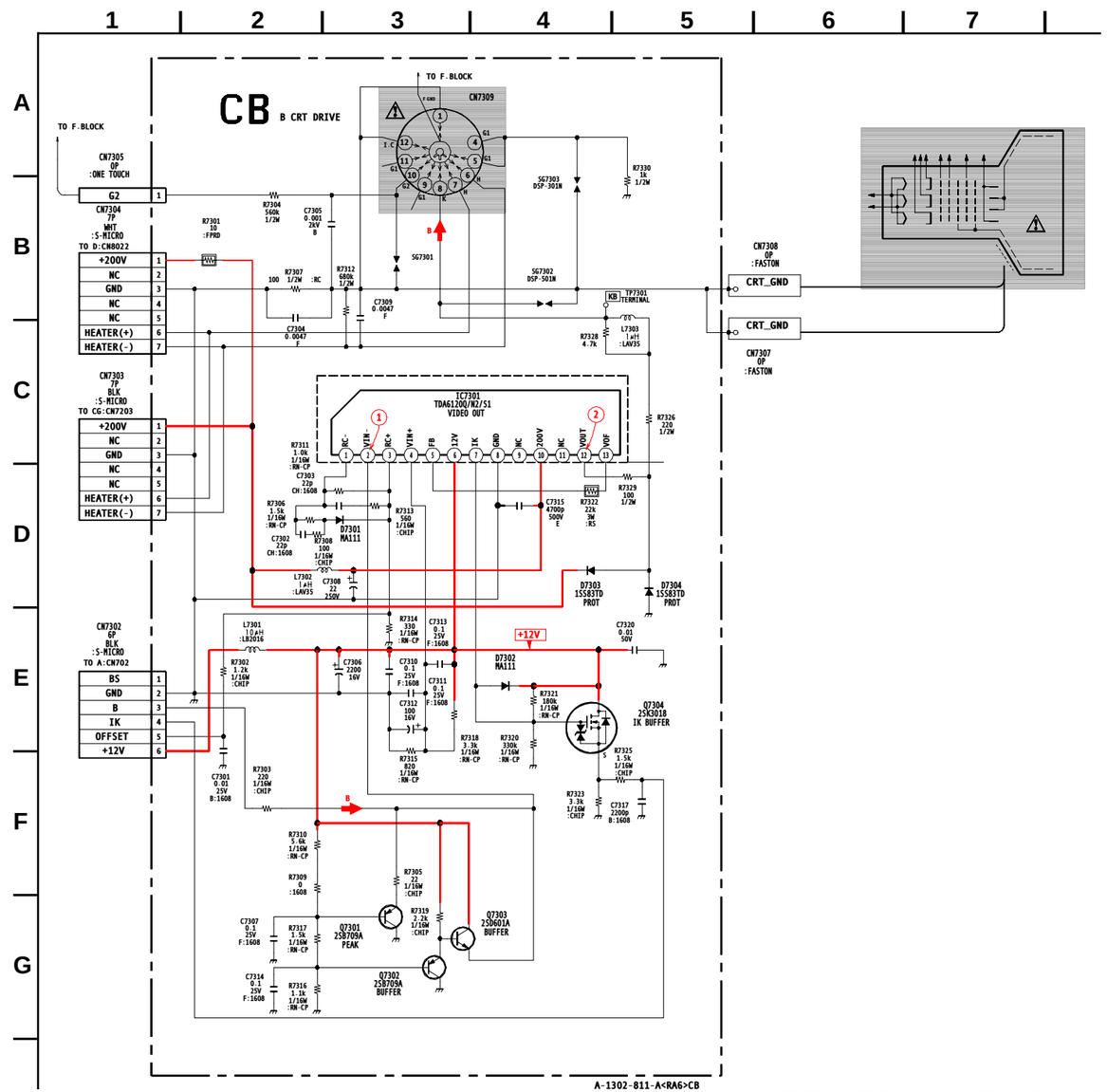
CR [R CRT DRIVE]
COMPONENT SIDE



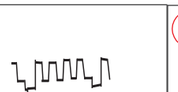
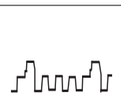
CR [R CRT DRIVE]
CONDUCTOR SIDE



CB BOARD SCHEMATIC DIAGRAM



CB BOARD WAVEFORMS

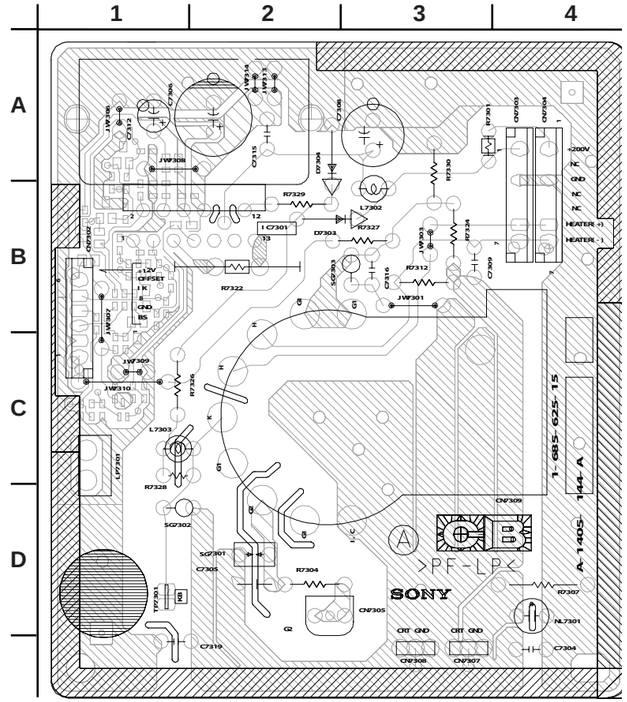
1	2
	
1.9 Vp-p (H)	94.0 Vp-p (H)

CB BOARD IC VOLTAGE LIST

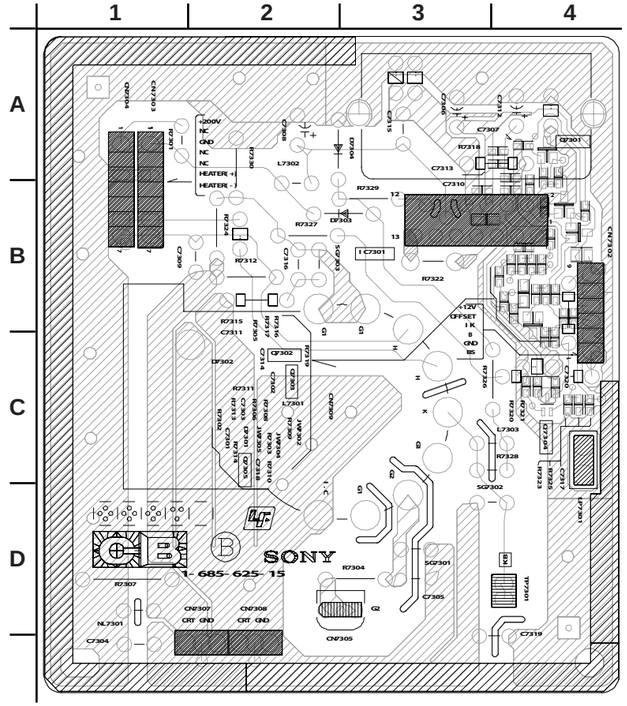
IC7301			
PIN	VOLT	PIN	VOLT
1	2.1	8	GND
2	2.9	9	N/C
3	1.6	10	200.0
4	2.9	11	N/C
5	2.5	12	161.8
6	12.0	13	144.5
7	7.3		

All voltages are in V.

CB [B CRT DRIVE] COMPONENT SIDE



CB [B CRT DRIVE] CONDUCTOR SIDE



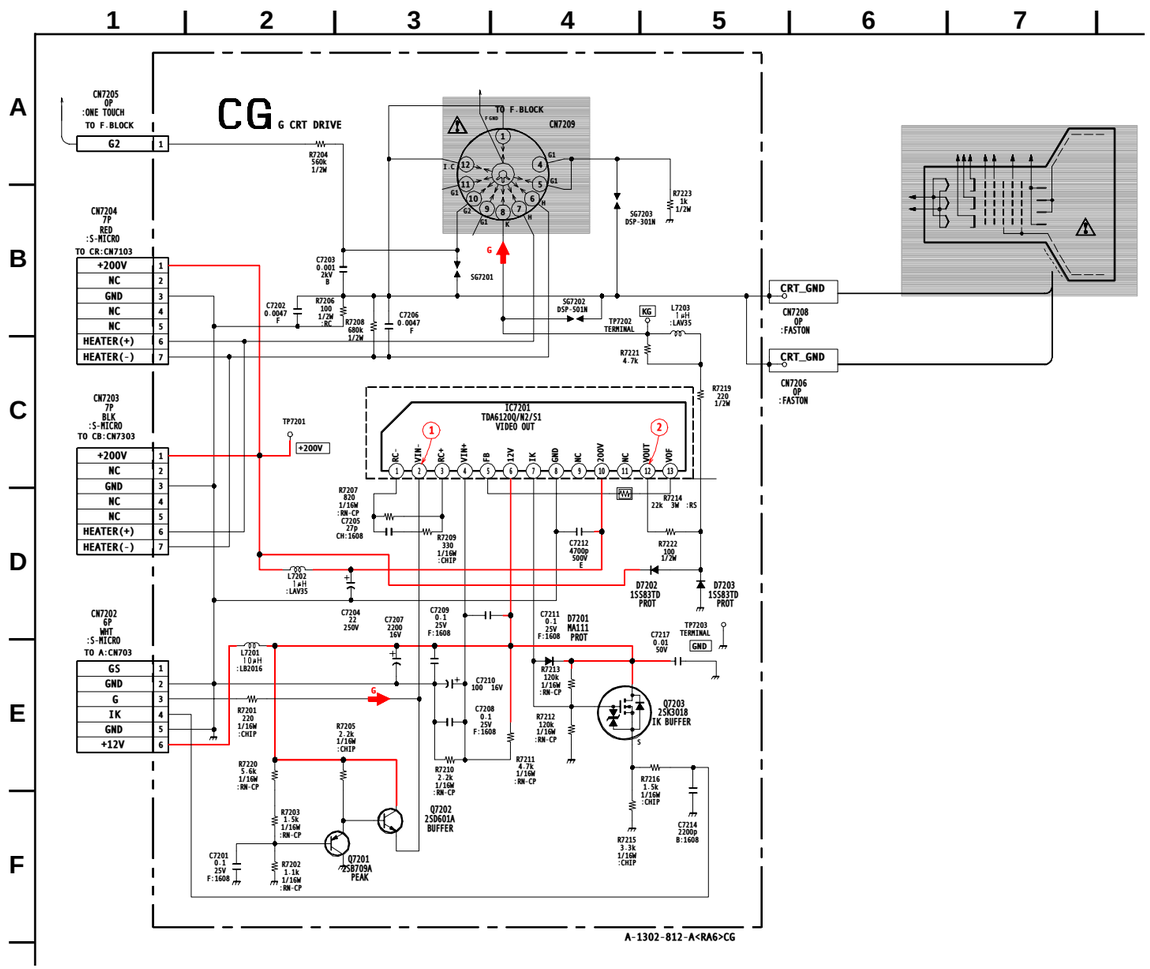
CB BOARD TRANSISTOR LIST

	B	C	E
Q7301	3.9	GND	3.0
Q7302	1.7	GND	2.4
Q7303	2.4	12.0	2.9

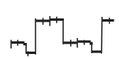
	G	D	S
Q7304	7.3	12.0	6.0

All voltages are in V.

CG BOARD SCHEMATIC DIAGRAM



CG BOARD WAVEFORMS

1	2
	
2.0 Vp-p (H)	101.5 Vp-p (H)

CG BOARD IC VOLTAGE LIST

IC7201			
PIN	VOLT	PIN	VOLT
1	1.9	8	GND
2	2.6	9	N/C
3	3.1	10	200.0
4	3.8	11	N/C
5	2.5	12	155.1
6	12.0	13	159.2
7	7.6		

All voltages are in V.

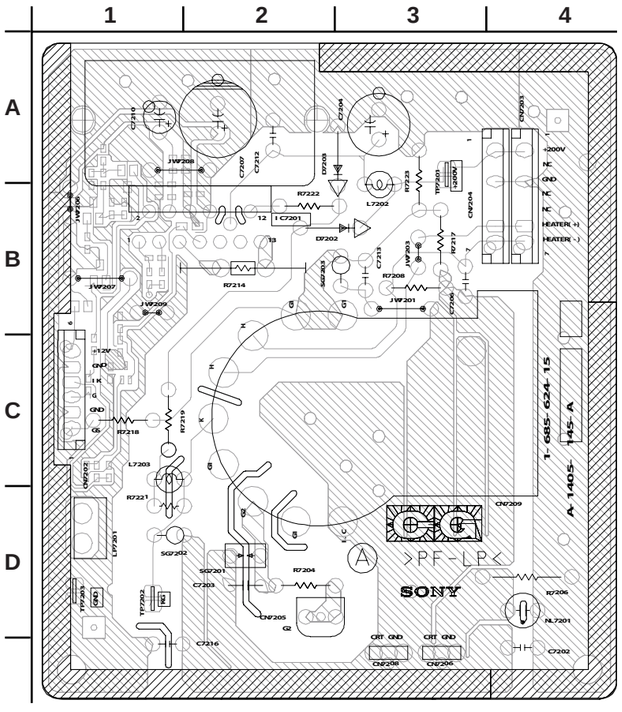
CG BOARD TRANSISTOR LIST

	B	C	E
Q7201	1.7	GND	2.3
Q7202	2.3	12.0	2.6

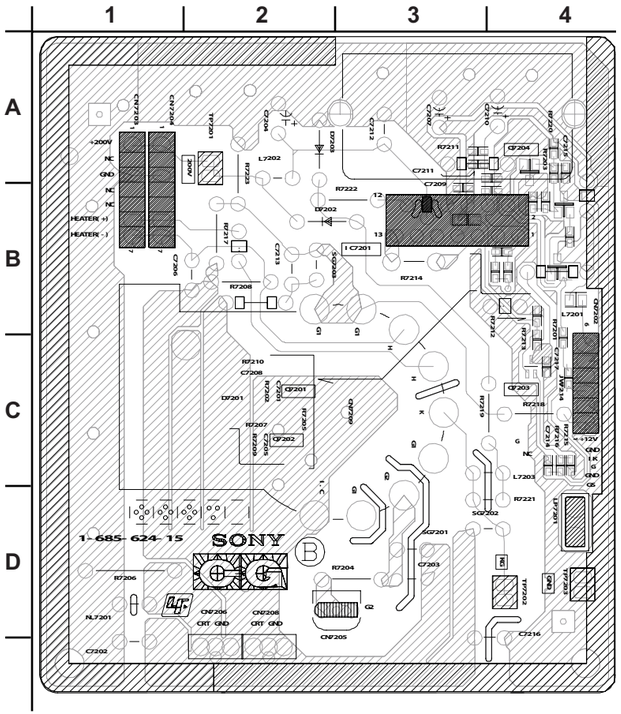
	G	D	S
Q7203	7.6	12.0	6.3

All voltages are in V.

CG [G CRT DRIVE] COMPONENT SIDE



CG [G CRT DRIVE] CONDUCTOR SIDE

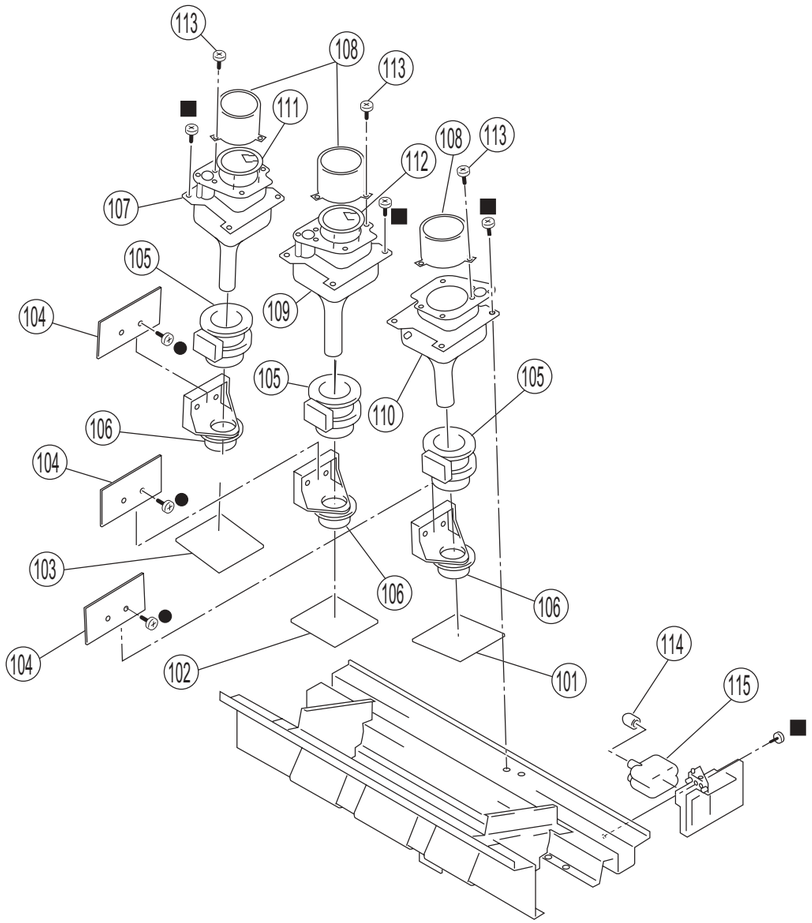


NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

6-4. PICTURE TUBE

■ 7-685-663-71 SCREW +BVTP 4X16 TYPE2 IT-3



REF.NO.	PART NO.	DESCRIPTION
101	* A-1302-811-A	CB MOUNTED PC BOARD
102	* A-1302-812-A	CG MOUNTED PC BOARD
103	* A-1302-810-A	CR MOUNTED PC BOARD
104	* A-1342-598-A	V MOUNT
⚠ 105	1-451-542-21	DEFLECTION YOKE (KP-51WS500 ONLY)
⚠ 105	1-451-536-21	DEFLECTION YOKE (KP-57WS500 ONLY)
⚠ 105	1-451-537-22	DEFLECTION YOKE (KP-65WS500 ONLY)
⚠ 106	1-452-790-31	NECK ASSY
⚠ 107	8-733-650-15	CRT 07MVC31(R)-L(FL) (KP-51WS500 ONLY)
⚠ 107	8-733-648-15	CRT 07MVC41(R)-L(FL) (KP-57WS500 ONLY)
⚠ 107	8-733-666-05	CRT 07MVC61(R)-L(FL) (KP-65WS500 ONLY)
108	4-083-751-01	LENS (DELTA 250) (KP-51WS500 ONLY)
108	4-083-750-01	LENS (DELTA 260) (KP-57WS500 ONLY)
108	4-087-842-01	LENS (DELTA 270) (KP-65WS500 ONLY)
⚠ 109	8-733-652-15	CRT 07MVC21(G)-L(FL)
⚠ 110	8-733-649-15	CRT 07MVC31(B)-L(FL) (KP-51WS500 ONLY)
⚠ 110	8-733-647-15	CRT 07MVC41(B)-L(FL) (KP-57WS500 ONLY)
⚠ 110	8-733-665-05	CRT 07MVC61(B)-L(FL) (KP-65WS500 ONLY)
111	4-088-542-01	SHADE (R) (KP-57WS500/65WS500 ONLY)
112	4-088-543-01	SHADE (G) (KP-57WS500/65WS500 ONLY)
113	4-081-063-01	SCREW, DOME WASHER HEX TAP (4 X 20)
114	4-373-137-01	CAP (Z), RUBBER
⚠ 115	8-598-955-32	BLOCK ASSY, HV HVB-1031

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

VCR

REF.NO.	PART NO.	DESCRIPTION	VALUES		
R9021	1-216-799-11	METAL CHIP	15	5%	1/10W
R9022	1-249-421-11	CARBON	2.2K	5%	1/4W
R9023	1-249-421-11	CARBON	2.2K	5%	1/4W
R9024	1-249-405-11	CARBON	100	5%	1/4W
R9025	1-249-385-11	CARBON	2.2	5%	1/4W
R9027	1-249-385-11	CARBON	2.2	5%	1/4W
R9028	1-249-405-11	CARBON	100	5%	1/4W
R9029	1-215-913-11	METAL OXIDE	220	5%	3W
R9030	1-249-377-11	CARBON	0.47	5%	1/4W
R9031	1-249-385-11	CARBON	2.2	5%	1/4W
R9032	1-249-385-11	CARBON	2.2	5%	1/4W
R9033	1-249-436-11	CARBON	39K	5%	1/4W
R9034	1-249-436-11	CARBON	39K	5%	1/4W

☛CR

*	**A-1302-810-A**	**CR BOARD, COMPLETE**	
	4-382-854-11	SCREW (M3X10), P, SW (+)	
*	7-651-000-50	GREASE,SILICON (G-746) 200G	
	CAPACITOR		
C7101	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C7102	1-101-003-00	CERAMIC	0.0047µF 50V
C7103	1-104-570-11	CERAMIC	0.001µF 10% 2KV
C7104	1-107-662-11	ELECT	22µF 20% 350V
C7105	1-162-918-11	CERAMIC CHIP	18pF 5% 50V
C7106	1-126-768-11	ELECT	2200µF 20% 16V
C7107	1-161-830-00	CERAMIC	0.0047µF 500V
C7108	1-101-003-00	CERAMIC	0.0047µF 50V
C7109	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C7110	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C7111	1-126-933-11	ELECT	100µF 20% 16V
C7112	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C7114	1-162-966-11	CERAMIC CHIP	0.0022µF 10% 50V
C7117	1-164-096-11	CERAMIC	0.01µF 50V
	CONNECTOR		
* CN7102	1-564-509-11	PLUG, CONNECTOR 6P	
* CN7103	1-564-510-11	PLUG, CONNECTOR 7P	
CN7104	1-785-879-11	CONNECTOR, ONE TOUCH	
CN7105	1-695-915-11	TAB (CONTACT)	
CN7107	1-695-915-11	TAB (CONTACT)	
⚠ CN7108	1-251-182-11	SOCKET, CRT	

REF.NO.	PART NO.	DESCRIPTION	VALUES		
	DIODE				
D7101	8-719-404-50	DIODE	MA111-TX		
D7102	8-719-901-83	DIODE	1SS83		
D7103	8-719-901-83	DIODE	1SS83		
	IC				
IC7101	8-759-680-01	IC	TDA6120Q/N2/S1		
	JUMPER WIRE				
JW7104	1-216-864-11	SHORT CHIP			
	COIL				
L7101	1-469-555-21	INDUCTOR	10µH		
L7102	1-414-855-31	INDUCTOR	1µH		
L7103	1-414-855-31	INDUCTOR	1µH		
	TRANSISTOR				
Q7101	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX		
Q7102	8-729-422-27	TRANSISTOR	2SD601A-Q		
Q7103	8-729-048-50	TRANSISTOR	2SK3018-T106		
	RESISTOR				
R7101	1-260-132-11	CARBON	560K	5%	1/2W
R7102	1-216-813-11	METAL CHIP	220	5%	1/10W
R7103	1-218-693-11	METAL CHIP	1.1K	0.50%	1/10W
R7104	1-218-696-11	METAL CHIP	1.5K	0.50%	1/10W
R7105	1-219-743-11	METAL	100	5%	1/2W
R7106	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R7107	1-260-133-11	CARBON	680K	5%	1/2W
R7108	1-218-692-11	METAL CHIP	1K	0.50%	1/10W
R7109	1-216-815-11	METAL CHIP	330	5%	1/10W
R7110	1-218-703-11	METAL CHIP	3K	0.50%	1/10W
R7111	1-218-710-11	METAL CHIP	5.6K	0.50%	1/10W
R7112	1-218-746-11	METAL CHIP	180K	0.50%	1/10W
R7113	1-218-746-11	METAL CHIP	180K	0.50%	1/10W
R7114	1-215-925-11	METAL OXIDE	22K	5%	3W
R7116	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R7118	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R7119	1-260-320-11	CARBON	220	5%	1/2W
R7120	1-218-710-11	METAL CHIP	5.6K	0.50%	1/10W
R7121	1-249-425-11	CARBON	4.7K	5%	1/4W
R7122	1-260-087-11	CARBON	100	5%	1/2W
R7123	1-260-328-11	CARBON	1K	5%	1/2W

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

CR CG

REF.NO.	PART NO.	DESCRIPTION	VALUES		
	SPARK GAP				
SG7101	1-519-422-11	GAP, SPARK			
SG7102	1-517-729-31	GAP, SPARK			
SG7103	1-519-421-11	GAP, DISCHARGE			
☛ CG					
	A-1302-812-A	**CG BOARD, COMPLETE**			
	4-382-854-11	SCREW (M3X10), P, SW (+)			
*	7-651-000-50	GREASE,SILICON (G-746) 200G			
	CAPACITOR				
C7201	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7202	1-101-003-00	CERAMIC	0.0047µF		50V
C7203	1-104-570-11	CERAMIC	0.001µF	10%	2KV
C7204	1-107-662-11	ELECT	22µF	20%	350V
C7205	1-162-920-11	CERAMIC CHIP	27pF	5%	50V
C7206	1-101-003-00	CERAMIC	0.0047µF		50V
C7207	1-126-768-11	ELECT	2200µF	20%	16V
C7208	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7209	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7210	1-126-933-11	ELECT	100µF	20%	16V
C7211	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7212	1-161-830-00	CERAMIC	0.0047µF		500V
C7214	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V
C7217	1-164-096-11	CERAMIC	0.01µF		50V
	CONNECTOR				
* CN7202	1-564-509-11	PLUG, CONNECTOR 6P			
* CN7203	1-564-510-11	PLUG, CONNECTOR 7P			
* CN7204	1-564-510-11	PLUG, CONNECTOR 7P			
CN7205	1-785-879-11	CONNECTOR, ONE TOUCH			
CN7206	1-695-915-11	TAB (CONTACT)			
CN7208	1-695-915-11	TAB (CONTACT)			
⚠ CN7209	1-251-182-11	SOCKET, CRT			
	DIODE				
D7201	8-719-404-50	DIODE	MA111-TX		
D7202	8-719-901-83	DIODE	1SS83		
D7203	8-719-901-83	DIODE	1SS83		
	IC				
IC7201	8-759-680-01	IC	TDA6120Q/N2/S1		

REF.NO.	PART NO.	DESCRIPTION	VALUES		
	JUMPER WIRE				
JW7214	1-216-864-11	SHORT CHIP			
	COIL				
L7201	1-469-555-21	INDUCTOR	10µH		
L7202	1-414-855-31	INDUCTOR	1µH		
L7203	1-414-855-31	INDUCTOR	1µH		
	TRANSISTOR				
Q7201	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX		
Q7202	8-729-422-27	TRANSISTOR	2SD601A-Q		
Q7203	8-729-048-50	TRANSISTOR	2SK3018-T106		
	RESISTOR				
R7201	1-216-813-11	METAL CHIP	220	5%	1/10W
R7202	1-218-693-11	METAL CHIP	1.1K	0.50%	1/10W
R7203	1-218-696-11	METAL CHIP	1.5K	0.50%	1/10W
R7204	1-260-132-11	CARBON	560K	5%	1/2W
R7205	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R7206	1-219-743-11	METAL	100	5%	1/2W
R7207	1-218-690-11	METAL CHIP	820	0.50%	1/10W
R7208	1-260-133-11	CARBON	680K	5%	1/2W
R7209	1-216-815-11	METAL CHIP	330	5%	1/10W
R7210	1-218-700-11	METAL CHIP	2.2K	0.50%	1/10W
R7211	1-218-708-11	METAL CHIP	4.7K	0.50%	1/10W
R7212	1-218-742-11	METAL CHIP	120K	0.50%	1/10W
R7213	1-218-742-11	METAL CHIP	120K	0.50%	1/10W
R7214	1-215-925-11	METAL OXIDE	22K	5%	3W
R7215	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R7216	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R7219	1-260-320-11	CARBON	220	5%	1/2W
R7220	1-218-710-11	METAL CHIP	5.6K	0.50%	1/10W
R7221	1-249-425-11	CARBON	4.7K	5%	1/4W
R7222	1-260-087-11	CARBON	100	5%	1/2W
R7223	1-260-328-11	CARBON	1K	5%	1/2W
	SPARK GAP				
SG7201	1-519-422-11	GAP, SPARK			
SG7202	1-517-729-31	GAP, SPARK			
SG7203	1-519-421-11	GAP, DISCHARGE			

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

CB

CB

REF.NO.	PART NO.	DESCRIPTION	VALUES		
	A-1302-811-A	**CB BOARD, COMPLETE**			
	4-382-854-11	SCREW (M3X10), P, SW (+)			
*	7-651-000-50	GREASE,SILICON (G-746) 200G			
	CAPACITOR				
C7301	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C7302	1-162-919-11	CERAMIC CHIP	22pF	5%	50V
C7303	1-162-919-11	CERAMIC CHIP	22pF	5%	50V
C7304	1-101-003-00	CERAMIC	0.0047µF		50V
C7305	1-104-570-11	CERAMIC	0.001µF	10%	2KV
C7306	1-126-768-11	ELECT	2200µF	20%	16V
C7307	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7308	1-107-662-11	ELECT	22µF	20%	350V
C7309	1-101-003-00	CERAMIC	0.0047µF		50V
C7310	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7311	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7312	1-126-933-11	ELECT	100µF	20%	16V
C7313	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7314	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7315	1-161-830-00	CERAMIC	0.0047µF		500V
C7317	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V
C7320	1-164-096-11	CERAMIC	0.01µF		50V
	CONNECTOR				
* CN7302	1-564-509-11	PLUG, CONNECTOR	6P		
* CN7303	1-564-510-11	PLUG, CONNECTOR	7P		
* CN7304	1-564-510-11	PLUG, CONNECTOR	7P		
CN7305	1-785-879-11	CONNECTOR, ONE TOUCH			
CN7307	1-695-915-11	TAB (CONTACT)			
CN7308	1-695-915-11	TAB (CONTACT)			
⚠ CN7309	1-251-182-11	SOCKET, CRT			
	DIODE				
D7301	8-719-404-50	DIODE	MA111-TX		
D7302	8-719-404-50	DIODE	MA111-TX		
D7303	8-719-901-83	DIODE	1SS83		
D7304	8-719-901-83	DIODE	1SS83		
	IC				
IC7301	8-759-680-01	IC	TDA6120Q/N2/S1		

REF.NO.	PART NO.	DESCRIPTION	VALUES		
	JUMPER WIRE				
JW7302	1-216-864-11	SHORT CHIP			
JW7304	1-216-864-11	SHORT CHIP			
JW7305	1-216-864-11	SHORT CHIP			
	COIL				
L7301	1-469-555-21	INDUCTOR	10µH		
L7302	1-414-855-31	INDUCTOR	1µH		
L7303	1-414-855-31	INDUCTOR	1µH		
	TRANSISTOR				
Q7301	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX		
Q7302	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX		
Q7303	8-729-422-27	TRANSISTOR	2SD601A-Q		
Q7304	8-729-048-50	TRANSISTOR	2SK3018-T106		
	RESISTOR				
R7301	1-249-393-11	CARBON	10	5%	1/4W
R7302	1-216-822-11	METAL CHIP	1.2K	5%	1/10W
R7303	1-216-813-11	METAL CHIP	220	5%	1/10W
R7304	1-260-132-11	CARBON	560K	5%	1/2W
R7305	1-216-801-11	METAL CHIP	22	5%	1/10W
R7306	1-218-696-11	METAL CHIP	1.5K	0.50%	1/10W
R7307	1-219-743-11	METAL	100	5%	1/2W
R7308	1-216-809-11	METAL CHIP	100	5%	1/10W
R7309	1-216-864-11	SHORT CHIP			
R7310	1-218-710-11	METAL CHIP	5.6K	0.50%	1/10W
R7311	1-218-692-11	METAL CHIP	1K	0.50%	1/10W
R7312	1-260-133-11	CARBON	680K	5%	1/2W
R7313	1-216-818-11	METAL CHIP	560	5%	1/10W
R7314	1-218-680-11	METAL CHIP	330	0.50%	1/10W
R7315	1-218-690-11	METAL CHIP	820	0.50%	1/10W
R7316	1-218-693-11	METAL CHIP	1.1K	0.50%	1/10W
R7317	1-218-696-11	METAL CHIP	1.5K	0.50%	1/10W
R7318	1-218-704-11	METAL CHIP	3.3K	0.50%	1/10W
R7319	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R7320	1-218-752-11	METAL CHIP	330K	0.50%	1/10W
R7321	1-218-746-11	METAL CHIP	180K	0.50%	1/10W
R7322	1-215-925-11	METAL OXIDE	22K	5%	3W
R7323	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R7325	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R7326	1-260-320-11	CARBON	220	5%	1/2W
R7328	1-249-425-11	CARBON	4.7K	5%	1/4W
R7329	1-260-087-11	CARBON	100	5%	1/2W
R7330	1-260-328-11	CARBON	1K	5%	1/2W

CB

REF.NO.	PART NO.	DESCRIPTION	VALUES
	SPARK GAP		
SG7301	1-519-422-11	GAP, SPARK	
SG7302	1-517-729-31	GAP, SPARK	
SG7303	1-519-421-11	GAP, DISCHARGE	

REF.NO.	PART NO.	DESCRIPTION	VALUES

9-965-932-92

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